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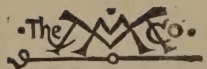
THE DEVELOPMENT OF ECONOMICS

1750–1900



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THE DEVELOPMENT OF ECONOMICS

1750-1900

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PREFACE

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The main purpose of this short history of economics *as a science* is to help students find a perspective for a large variety of facts whose connection and common ground may be easily lost sight of; and beyond that to show with some degree of definiteness how far economics even today rests on concepts worked out during the eighteenth century.

To attain these two ends the writer has ignored some material that should properly have a place in a more comprehensive survey. He has decided to depart from custom and to treat, not individual writers or small groups of them, but only those currents of thought as a whole which differ in fundamentals, and have long since been recognised as of primary importance in the development of political economy. For this reason all systems have been reduced to four, and each system furthermore—with the exception of Historism—has been subdivided into two parts, the first dealing with the presuppositions that were borrowed from philosophy, logic, ethics and psychology, and the second with definitions and laws such as have always formed the main body of economic doctrines. It will be found, of course, that this necessitated an overlapping of periods, besides at times making difficult the decision as to the division to which a writer should be assigned, considering the scope of his ideas and several modes of approach. But on the other hand, such a simplification has a distinct pedagogical value, provided we aim at an outline sketch rather than at

a complete picture, whose details detract so often from the principal theme.

In the belief that quotations are appropriate whenever the text treats of new facts or involves a re-interpretation of old facts, excerpts from many sources, both of economic and of non-economic literature, have been woven into the argument; but it is hoped that this will prove an aid to beginners and perhaps stimulate inquiry into the sources themselves. Indeed, to meet the interest particularly of college students, references have usually been added in footnotes, and a bibliography is provided to facilitate a more detailed investigation than is afforded by general histories of the subject.

In conclusion, the writer begs leave to add that this review was originally undertaken preparatory to a critical estimate of present economic theories, of their characteristics and possible development—an estimate that he expects to complete in the near future. Such a critique he deems to be the main task of economists today, and he would consider the review now before the reader as having fallen short of its goal if it did not help him to appreciate some of the perplexities that at present confront the economist both here and in Europe.

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THE DEVELOPMENT OF ECONOMICS

CHAPTER ONE

INTRODUCTION

The Genetic Viewpoint.—There is a history for nearly everything because life is more than an arithmetical proposition. If our experience consisted merely of an adding or subtracting of magnitudes perfectly definite and comparable, it might have the merit of simplicity, but few would like its monotonous course. What gives spice to life is variety, and one principal test of variety is the difficulty we find in trying to equate things. When many kinds of elements must be correlated, when interaction is more than a parallelogram of forces as mechanics knows it, then events take place which are the very essence of History.

History deals with processes in time, or perhaps *is* time itself, because it consists of changes by which, in the last analysis, time becomes measurable. Each individual makes his own history, since his experiences are largely of different sorts and cannot be put together like the components of a sum. We associate history with larger groups only, because we ascribe to them an immortality which is not really theirs. For the members of any group, however mighty, die in due time; what

survives is a set of relations with which we have, consciously or unconsciously, identified that group. Consequently the history of a nation offers interesting material for study, each of us seeing a part of his self reflected in the personality of the whole. Yet, whether we write autobiography or universal history, the fundamental fact is always that of change. The older we grow, the greater the fund of facts for a narrative, the more noticeable the transiency of things, thoughts, structures and functions. Nothing proves to be quite permanent. All items are subject to revision and destruction. Relative values alone can be established, except that the *notion* at least of an absolute must exist if its opposite is to become logical.

Both science and common sense have turned increasingly during the last century to this aspect of relativism. Not autocracy but democracy, i. e., rights and duties properly related to common ends, not universalism but the territorial origin of laws and ideals, not transcendental realities that experience will never prove, but knowledge born of the senses and variable with person, time, and place; not isolation for self-sufficient individuals, but interrelations which make each one an integral part of a larger whole—such are the modern contrasts that make clear the issue of absolutism versus relativism. The question is not whether ideals may exist or pictures be imagined that reach beyond the world of sense, but whether, so far as the past has shown, our constructs are imperishable, our standards eternally the same, our applications successful according to plans. And here the answer is as unequivocal as it is easy: the whole history of thought testifies to the relativity of our understanding. Nothing is quite certain. Nothing holds good for more than a time. The truths that have been recog-

nized from the beginning of civilization and cherished ever since as axiomatic are few indeed. In relations with our fellowmen certain needs and reactions may be said to prove the constancy of human nature; but even here our records are incomplete.

The historical standpoint therefore is natural enough. It must always puzzle the student of science that the relativity in time and space of all human values was so late in being built into a comprehensive theorem. Where change is so universal and persistent, how could men fail to grasp the principle while noting the facts? The Orientals and the Greeks of course had known both in a general way, but a definite formulation with conclusions to guide us in our quest for truth did not come until very recently.

The historical viewpoint is now only a species within the genus Genetics. The genetic outlook comprises the sum total of changes about us, while the historian devotes himself particularly to the elucidation of human activities and judgments. What is true of the cosmos is proven to be doubly applicable to man, namely, that change is a rule without exceptions. Change as motion and interaction in the physical and chemical world. Change as metabolism, growth, and decay. Changes of habits and opinions, manners and wishes and needs. Changes of which only the scientist can become convinced, because they take place so slowly that the senses will not perceive them. Changes in flora and fauna, of earth and the cosmos, and of man whose records more especially interest us. Everywhere the same law. A becoming, waxing, and waning. A series of stages more or less open to inspection. Continuity amid variations. Different rates of change, and overlappings as between different fields of action, but always a binding link, a correlation

traceable after due inquiry, a possibility of explaining how and when and where the modifications affected the object in question, our beliefs and customs, our sciences and religions, our modes of living and public policies. The genetic principle proves equally fruitful whether we study creed or deed, things or thoughts, politics or economics.

History, then, has value even though we deny its application to ethics. The lesson may not be one to guide our future conduct or to suggest formulæ which science by itself cannot frame. But nevertheless there are advantages in sight. For whether history is written simply to tell how things really happened,—as Leopold von Ranke said,—or whether we hope from the beginning to shed light on the present by scanning the records of the past, the benefit remains the same. Information is ours in both cases. The use to which we put it is no concern of the historian, though, to be sure, it is a foregone conclusion that a valuation of some sort has occurred. For, in the words of the poet:

> "My friend, the times gone by are but in sum
> A book with seven seals protected
> What spirit of the times you call
> Good Sirs is but your spirit after all
> In which the times are seen reflected."

It is practically impossible to speak of the past without putting into it something of the present. Retrospects necessarily are partly prospective. As we look forward or around us, we behold times gone by, whose life becomes intelligible only as, at one point or another, it connects with our own. Historians consequently dare not hope to be mere assemblers of facts, even if they wished to. The fact itself is little or nothing, the interpretation much or everything. The *value* put upon events of the

past is the core of historiography. By consulting human nature we are enabled to reconstruct the motives and materials of an earlier epoch, but though this reasoning from analogy will always be at the bottom of historical research, the externals of life vary sufficiently to influence us to-day when we rehearse the happenings of yesterday. The present arose out of the past, which may help to explain the former. To judge rightly on the faults or merits of existing institutions we must follow them back to their sources and intermediate stations. All this harmonizes with our modern habit of prefacing a critique of what *is* with a review of how it came into being. But we are at the same time to remember the pragmatic nature of historical research, the limited value of any attempt to portray faithfully a situation no longer before us.

The Economic Interpretation of History.—The founders of socialism helped to set us aright in this matter by their blunt assertion that history becomes explicable in the light of economic conditions. They overlooked or disparaged the power of existing thoughts and prejudices, and magnified the force of external circumstances. They said: Yes, you can find out just exactly what people were and did and wanted and believed at any given period, but you must first study the economy of that period. A real world existed then as now. Your knowledge of it may be pretty definite, and true to things as they actually were. It is not a question of being under the sway of your personal notions or of your *Zeitgeist*, but of being willing to look for solutions where alone they reside, in the modes of production and exchange of goods. Whatever the laws or the philosophies or the religions or the customs of the time, be sure to connect them with the economic background, and do it so that the causal relation runs consistently from the latter to the former.

For the *economic* interpretation of history is the only accurate one. No other can suffice. To understand the speculations on property and government of any one epoch relate them to the mode of living of its people, to their social organization as dictated by principles of production. Histories of thought do not run in a continuous thread from one century to the next, but rather by installments, each one of which receives its stamp from the economic substratum whence it was derived. Each age—defining it as a particular system of economic organization, production, and distribution—has its own intellectual peculiarities, and continuity between them will appear only in so far as customs or creeds gather a momentum that carries them beyond the time to which they properly belong. Principles of social heredity therefore cause curves of thought that depart somewhat from economic lines of division, but nonetheless the general principle obtains.

This is the view often known as economic determinism. If one had to accept it, a historical sketch of any one science would be impossible without constant reference to facts which the specialist might master perfectly, but whose significance for the scientist in question it would be difficult to ascertain. One would have to ask: Which economic data should be made to bear on which detail of the doctrines under examination, and who is to judge for both?

Luckily, however, one need not interpret the rule too narrowly, for in several respects authority is against it. Men, for instance, have written excellent, illuminating, and elaborate histories of thought, religion, customs, and other phases of life without obeying the law of economic periods. An intimate relation between creed, conduct, and condition has usually been shown to exist, but each

one has had significance independent of the other. But furthermore, in the testing out of the theorem it has become evident that the main point is not whether cross-references may be advisable or even necessary—for most historians would grant so much—but whether economic conditions possess a *causal* force, an exclusive power of explanation without which all else remains obscure. And here psychology as well as the direct evidence of facts has, on the whole, favored the opponent more than the friend of the Marxian doctrine.

For if psychology proves anything it proves the incommensurability of ideas. The economic interpretation of history gives us to understand that a more or less fixed ratio exists between systematic thought and the concrete facts of economic life. Psychology, however, is definite in declaring the flexibility of such a relation, indeed the impossibility of establishing any ratio between the two factors involved. Stimuli from without are not the only ones to consider. Economic circumstances do not alone act upon us. One stimulus may end in several responses, and one response may have to wait upon a congeries of stimuli, either all issuing outside of us, or partly aroused from within. Perception is a peculiar compound of primal elements originating in sensation and association. A chemistry is continually going on that makes unrecognizable a train of thought if we were to judge it merely by its objective origins.

Consciousness comprises the three fundamental processes of sensation, selection, and retention. An idea, as we grow from babyhood into adolescence or old age, undergoes innumerable changes in its constituencies. Inhibition is increasingly at work. We select only a few of all the potential excitants around us. Percepts consequently are the result of eliminations as well as of addi-

tions and corrections, of shifting in stress and reassembling of parts into a variable focus. Invention cannot be measured by the tangible or intangible facts of wealth. Innovation is at least as self-sufficient as production of goods outside. What new thought, what new ideal, what new application will spring from older ones due, in a sense, to certain assignable economic facts, no one can predict. The relation between these forces is not a quantitative one as socialists have maintained. And for this reason economic data cannot be indispensable to the explanation of successive emanations of the mind. Intellectual history stands on its own ground. Or in the words of a competent authority: "The movement of thought might be regarded as an interaction of purposes and environment, each of which in some measure modifies the other. At least no interpretation and no improvement can be considered as a discrete event. It has its meaning in, and its appearance and development is controlled by, wider mental and physical contexts. These serve to determine the nature of the appreciation and to give the desire that leads to the particular improvements. In this way the progress of thought is one continuous operation. No part can be understood unless it is considered with the whole." [1]

There are objective tests for this contention in the annals of history itself. It can easily be shown that the religion or philosophy of an age may vary greatly for different nations even though their modes of production and distribution are substantially the same. Or the converse is true, since with quite different economic conditions the trend of thought has been nearly the same for all. Any comparison of acts of legislation, metaphysical systems, world religions, moral standards, and

[1] Pillsbury, W. B. Psychology of Reasoning, p. 286.

literary or art achievements will illustrate the principle. Or one might watch the growth of ideas in an individual from boyhood to old age. The conditions of work and consumption may remain constant, but the accession of ideas, including those not peculiar to the given general economic environment, will go on, engendering feelings and characteristics of conduct virtually independent of those conditions.

In the end, however, the crux of the question lies in the definition of "economic" and of "cause." What precisely is meant by an economic fact? In what sense can anything be the cause of something else? The answer for both is: We know only by definition, that is by hypothesis. An economic fact is not an isolated individual any more than any other circumstance. We are face to face with complexities that to untangle into two elements, the economic and non-economic, would be a trying task. We accept distinctions because they serve to emphasize aspects or to focus our attention upon particular purposes; but any condition such as that of producing a bushel of wheat involves as much the interaction of minds in *all* their powers and parts as a belief, say, in the Nicæan Creed. The discoveries of science are correlations, and not causation in a straight line. What experience brings out continually is the interdependence of events, not their growth from one single taproot that might feed all else. We can tell something, but not everything, from the groundwork of a structure; neither can we infer a great deal as to the foundations by studying the upper parts alone. Which is to be emphasized in describing the building, where we are to begin and how we are to appraise its features, depends more on what we expect from it than on any particular class of materials employed. Histories of thought for these reasons

have been written again and again free of economic allusions, and good judges have approved, so long as the general canons of historiography were not lost sight of. Selection, balance, sequence, clarity and force, these have ever been essentials. The interlacing of the economic and the non-economic must be left to the student, whose methods will doubtless be individualized to a certain extent.

Lessons of History.—What history however does show is the periodic recurrence of an optimistic and pessimistic attitude toward the subject under investigation. One soon finds, on scanning the annals of intellectual development, that a skeptical turn of mind becomes common among philosophers when certain conditions have been fulfilled that do not prevail equally at all times. Constructive and destructive periods alternate. A critical spirit arises when maladjustment of savants to their subject exceeds a given point, when the old and the new in beliefs conflict, when needs and creeds move in opposite directions or at divergent angles, when the conclusions of one science cease to harmonize with the premises of another. Transition periods are proverbially scornful of established sanctions; or should we say, when the old proves worthless anything novel has charms? No matter. There are ascending and descending epochs of research. We have pioneers in one, and iconoclasts in the next; minds who answer our questions, and those leaving nought but wreckage. Mankind at large does what individuals must do now and then, namely, take stock of what they have and lack, of what they think they ought to have. Or, to change the metaphor, mankind and thinkers in particular, are like travelers on a long journey, whose goal is not always absolutely certain, whose maps prove unreliable, whose equipment needs

repairing bit by bit, whose search for shortcuts and easier paths may be rewarded, but also frustrated. There is the disposition to pause and ponder, to change one's mind or to see the landscape from changing standpoints; and this influences history no less than religious conversions.

A critique, likewise, may turn either to details or to cardinal points in a doctrine. We may disagree with the conclusions in general or with a few of a considerable mass. We may fail to see the validity of premises, or detect fallacies in deduction, or take exception to technical devices for measurement and correlation. Where verification is out of the question reasoning is more likely to be scrutinized closely than in cases that lend themselves readily to an objective test. If the perceivable facts about us belie a statement of science it will not be long before the critic has made his point. Otherwise a more arduous duty is before him. Sciences, e. g., claim methods in part peculiarly their own, or they rely upon premises which form the end results of another group of inquiry. The instruments for computation are perhaps found to lack more than the accustomed degree of precision; or conclusions and premises meet with approval, but the way they are coupled together provokes our censure. The history of any one science such as economics may therefore be attacked from several points, but what counts finally is not the length of argument or manner of exposition, but the net sum of revisions deemed necessary. Results once more measure effort!

Now, as regards the science of economics, the critical approach will be either predominantly practical or theoretical; and any review of its growth is likely to exhibit here and there the choice made.

In a utilitarian spirit we may point to the existing socio-economic evils, of which there are surely enough, and ask whether they are an unavoidable part of progress at any given stage, or chiefly the result of mistakes, of ignorance, and carelessness that will automatically correct itself as soon as social processes are studied more earnestly than they have been up to date. In recent years of course students of these phenomena have been given a hearing and somewhat of a chance to test the applicability of their doctrines. People have been willing, in growing number, to accept the opinion of specialists. However, on the other hand, the skeptical attitude has always seemed natural because of the elusive character of so much that is important in social investigation. Men have despaired of getting light on their practical questions by going to the theorist. The prevailing note has been: Economics has been over-confident, not to say over-pretentious and officious. Evils will continue to exist because no rationale of meliorism will ever be found, because there is no such thing as a scientific, systematic way of improving the lot of mankind. Progress is real, but it cannot be forced. Economics, therefore, has been a failure and will go on failing in so far as legislation must designedly ignore it. Rough estimates alone are possible. A knowledge of human nature gained at first hand is safer than any amount of abstraction offered by experts.

Scientists, however, will not dismiss the subject so lightly. To them the theoretical approach to any critique of their work or that of another is the only one worth while. As they see it, the important thing is not an assigning of guilt or an acquittal from a moral standpoint, but a probing into data, methods, and conclusions so far as a science has reached any. The ever repeated

query is: Do the principles enunciated square with the facts? Do they reflect the best knowledge of the day in allied fields of research? Do they rest on sound reasoning and a correct use of hypotheses? As to the now dominant economic system, for instance, is it self-consistent and fashioned out of materials, with the help of premises, that meet our experiences where they are available? And so far as the premises are concerned, on which hinges so much, do they substantially agree with the verdict of the science whence they were taken, or are readjustments and cancellations in order?

It is undoubtedly true that some sciences, in spite of the revisions found necessary from time to time, have nonetheless a residuum that is continuous and as near axiomatic as experimental methods can make them; while the social scientist or the philosopher treats of questions apparently never settled. The revaluation is partial in one case, and complete in the next. The alterations occur seldom in the first instance, separated by long intervals of time, and frequently in the next where one viewpoint seems as legitimate as a second and third. How are we to explain this difference, how to remove it if we can, how to accept it and yet feel entitled to the most serious consideration by outsiders? The question is as old as it is possibly unanswerable, but a severely critical attitude toward, e. g., economics must reckon with it sooner or later.

The larger issue raised a while ago takes on therefore a more engaging aspect. One is constrained to inquire just exactly what science is anyway, what the tests for any one, what the limits within which methods or applications may vary. The history of economics abounds in attempts to find a solution of this problem. From the outset men have sought to prove the scientific nature of

economics, to formulate definite laws of much breadth of operation and lasting value. The idea of law has engrossed philosophers and social scientists more perhaps than the investigators who have furnished the bulk of our scientific information. Again and again leading economists have expatiated on the inward nature of social regularities, on means and ways for getting at them, on initial steps by which a deductive or inductive mode of inference should assure us permanent fruits. To find truths independent of a single system of production or exchange, to make applicable to all nations what the life of any one revealed, to bring under a single central theme the richest variety of phenomena, all this has been the ambition of a Smith, Mill, Carey, and Jevons. Nothing was neglected to make conclusive the argument brought before the reader. The whole range of topics, once the sphere par excellence of philosophy, was scanned in order to find unity amid diversity. Thus a history of economics has to deal incidentally with questions not turning on price, distribution, or production. The founders cultivated a broad viewpoint. They strove to get at the roots of an ultimate problem of prosperity, explaining not merely why supply and demand are equalized, but how the weal of mankind might be deliberately fostered. In other words, pragmatic and purely theoretical aspects were never separated completely. It was a persistent search for ultimates rather than for values immediately at hand.

Hence the recurrent inquiry into what is fact and what fancy, what the relation between things and thought, what the control exercisable by mind over matter. Economists from time to time made these queries basic to others. They wished to know what reality was, what the nature of control or of causation, of law and will, of truth and

virtue, and the relation of one to the next. The Is and the Ought, repetition in history and possibilities of progress, such and like fundamentals were touched upon by men whose nearby field was wealth and income. A critic of economics in its present condition must take cognizance of these speculations, and the historian must record them if his survey is to have a perspective.

CHAPTER TWO

NATURALISM

I. Antecedents

The Birth of Science.—The study of economic subjects is no doubt almost as old as the history of mankind. It may safely be conjectured that men could not reach a high degree of civilization without busying themselves with the pros and cons of the manner of their living, of the sources of their weal and woe, of the ways and means available for improving their lot—all of which topics are, in their very nature, economic. What is more, we know that economic regulations had already become quite comprehensive in early Babylonian days, to say nothing of the meritorious part played by Greeks and Romans long before the advent of the Christian era.

If however we wish to find the beginnings of economics *as a science* we need not go back as far as antiquity, nor even much beyond the middle of the eighteenth century. For the astonishing revival of economic thought that characterized the period of 1500 to 1750 was not accompanied so much by definite attempts at systematizing results, as by marked additions of knowledge on a variety of subjects, part of it being given a universal value, but most of it bearing on problems of national policy. Strictly speaking these studies of Kameralists and Mercantilists lacked a scientific character because the thought had not yet dominated them that social processes follow laws, and admit of measurement or deductive treatment

exactly as physicists had reduced their own manifold to a few grand principles of matter in motion. Only with the appearance of the Physiocrats does economics cease to be a loose bundle of individual facts. Now for the first time a unifying code is sought and proclaimed to exist. Now surveys are made and theorems submitted for others' approval which overshadow whatever significance may be attached to the earlier literature.

Still, it would be a mistake to ignore the great impetus given to economic studies by the period of transition from medieval to modern times. The great bulk of our modern exact knowledge can be traced back to this period of re-awakening and searching whose advent had been so long prepared, and whose ultimate achievements so completely transformed the world.

During the Middle Ages nothing had been as firmly rooted in the minds of people as the need and goodness of authority. The guiding slogan of leaders was faith and submission. Authority was everything because its chief purpose had been announced in the Scriptures, and its sole oracle was the papacy—with all that that term implied. Authority of course has always existed and can therefore not be mentioned as a peculiar feature of the so-called Dark Ages. What was a distinguishing mark was the acceptance of authority even when the evidence of the sense contradicted it, or might easily have been invoked to contradict it. Authority in *all* matters, such was the axiom for high and low. It was not a case of submitting to hearsay because its teachings had been verified, or might at any time be proven correct to the satisfaction of doubters, but rather of extending the mandates of theology to other questions where tests might naturally suggest themselves.

The Middle Ages therefore stood for the maintenance

of a *status quo* as nearly as the practical and spiritual interests of Church or State advised it. The illiteracy of the masses was as much a help for preserving order as a hindrance to the dissemination of knowledge. The Holy Roman Church and the Holy Roman Empire worked hand in hand to fortify their creed of submission. Patristic literature and papal decrees, the Bible as officially placed at the disposal of the priesthood, the verdicts of Ecumenical Councils, and the codifications of law and dogma by great scholars like Gratian and Thomas Aquinas—such were the repositories of creed that none were permitted to impugn, whose power remained substantially intact for nearly a thousand years.

Of ancient writers Plato most enjoyed the esteem of the hierarchy until the twelfth century. After that Aristotle gained favor with the clergy, and even more with many of the secular students who now congregated around universities or pursued their studies independent of official recognition, content to search truth without encouragement, somewhat in the spirit of heroes and heretics. For the most part a foreign medium intervened between author and pupil. The Greeks were interpreted through Arabians whose commentaries won great fame. Roman works not infrequently circulated in medieval Latin, a variant and mutilation of the Ciceronian language. Studies from the sources were as rare as they were held unnecessary to a correct appreciation of ancient thought.

In fact, learning was not in any case a virtue of fundamental importance. Not knowledge but faith was the guarantee to salvation. The needs of the soul had no relation to the inclinations of the body or of an active mind. Asceticism ranked high because to forego things seemed more wholesome than to demand things. Suffer-

ing in a measure took the place of service. To undergo tortures might benefit man more than to enjoy comforts. The value of this life on earth consisted in its opportunities for purifying the soul, for ridding sinners of their handicaps in a quest for the eternal life to come. What the priest did was consequently more important than the guidance of teacher or legislator, although the Church did support both, and indeed was throughout the Dark Ages the prime agency for enlightenment and moral uplift.

After the thirteenth century, however, the Church was undergoing a decline. Just as the authority of monarchs, dukes, and barons suffered at the hands of a rebellious bourgeoisie whose fate seemed bound up inseparably with economic and legal liberties, so the hierarchy found insuperable difficulties in trying to curb skepticism. A new view of life was being crystallized. A turn-about of opinions and purposes took place which, by the sixteenth century, had definitely conquered the medieval order. Principles were now being announced that could not but overthrow hallowed customs. The center of interest shifted, so that in the end a series of problems came to the fore, the solution of which was part of the task assigned to economics.

This rebirth of an older philosophy, this Renaissance, as it has fitly been christened, began in the first place with an enthusiastic movement for the exploration of pagan antiquities. Greek and Roman civilization now more than ever preoccupied the minds of plodding students.. Barbarism, instead of being associated with heathenism, now came to mean ignorance of pre-Christian culture. Humanists these protagonists of pagan ideals styled themselves. Humanism breathed a cosmopolitan spirit like catholicism, but unlike this latter it

stressed worldliness and individual rights. Unlike medieval learning that of the Renaissance centered on a bold appreciation of the immediate environment, of human nature in all its phases, of possibilities for material advancement and artistic elevation such as men have cultivated ever since.

Studies from the source now became tests of scholarly worth. One need only compare the writings of a Reuchlin or Erasmus or Thomas More or Machiavelli with the best of medieval books to be impressed with the difference of outlook. What an abundance of citations from the Ancients! What a zest for learning regardless of its religious implications! What effervescence of spirit and lightness of heart, what daring of conception and faith in mankind's earthly destinies! Verily, men had sloughed off the garb of repentance; the joy of life bade them search and act, to speak without fear and to urge new works whose merit it would be for everybody to put to a test.

Petrarch had opened the new era with his sonnets and hymns to the beauty of nature. However near he was to Dante in point of time, his temper was of a very different age, of times then only in the budding, but foreordained to find magnificent expression in the literature of the Tudors, in French literature under the Bourbons, and in the outbursts of Italian poets and essayists from Genoa to Venice. Worldliness in painting and architecture, in music and sculpture, in Erasmus' "Praise of Folly" where knaves prove honest, in Sir Thomas More's "Utopia," and in monuments of scientific endeavor! A symptom indeed of the times, these utopias of many forms and intents that issued from the press between 1500 and 1700! How novel the idea that men should concern themselves with their frames of

government, with economic conditions, manners and customs, with modes of material living and the apportionment of rights and duties among the members of society! It seemed forsooth as if Alexander Pope had aptly summarized—in a sort of finale—this motto of the Renaissance, when he wrote:

> "Know thyself, presume not God to scan;
> The proper study of mankind is man."
> (Essay on Man, 1732.)

Perfectibility of human nature, as the eighteenth century spoke of it, could be seriously preached and attempted once it was understood that nothing mattered as much as the attainment of happiness and creature comforts by man while still on earth. The distant future might then perhaps be supposed to take care of itself.

Yet it is well known that Humanism was only the opening act in the longer drama. For the same rebirth that inspired a Melanchthon and Linacre also gave rise to the Reformation, to a moral house-cleaning on a vast scale, and to economic and intellectual enterprises unique in the annals of history.

The Protestant revolt to be sure had an economic background as many a historian has taken pains to elucidate. However, there was, on the other hand, a purely spiritual opposition to papal dominion, a growing feeling that creeds had outlasted their usefulness, a determination on the part of earnest-minded thinkers to subject to a crucial test the doctrines transmitted to, not to say foisted upon, them by earlier generations. The Protestant revolution therefore may serve as an example of the forces that furthered the cause of social science, since together with much conservatism it popularized the idea of personal worth and effort. At bottom

the theological creed remained metaphysical and unadaptable to scientific formulæ. An astonishing amount of the old verbiage, ritual, and dogma was retained as essential to human progress. Just as Aristotelianism died slowly among Humanists and philosophers, outliving the sixteenth century, so Christian dogmatism showed sufficient vitality in its Protestant dress to compete with rationalism and science for a place in the minds of men. Religion still was synonymous with an orthodoxy unknown to the synoptics. Yet, should it be doubted that the advantages outweighed the cost? That the return to the Bible as the source of religious truth, that the insistence upon Justification by Faith as the sole condition to redemption, that the nation-wide movements for moral regeneration, that all this marked a decided step in advance? The Enchiridion of Erasmus not inappropriately was published at the turn of the fifteenth century. From there on admonishments came plentifully, the clergy furnishing most usually the occasion, but the laity not forgetting its own duty in the campaign for betterment. Puritanism and the Counter-Reformation among the Catholics, Presbyterian zeal and Quaker simplicity, such are but incidents in a wave of idealism which helped to balance men when epoch-making discoveries unthroned old rules and rulers.

Conservatism and radicalism were strangely mixed in reformers like Luther and Melanchthon, in Cusanus and Kepler among scientific leaders. A bewildering variety of philosophical tendencies is noticeable during this time. The old and the new were companions as often as adversaries fighting for dear life. But on the whole the innovators had the best of it. Pioneers had not battled in vain. The sacrifices made by earlier champions of liberty and light gradually bore fruit. Much time had

passed since Wyclif's death in 1384, but the interval had also given strength to the individualists. Spinoza could write in an historical spirit that would have amazed even the first translator of the Bible into English. Authority after all had been shaken. It was possible now, at the beginning of the seventeenth century, to lay down principles, that dealt a death-blow to many medieval canons of truth.

Nowhere did the drift of the Renaissance find more unequivocal expression than in the rise of science and modern philosophy. Nowhere were the precepts of intellectual progress proclaimed so fearlessly, so ruthlessly, as in the works of scientists who yearned to uncover the secrets of nature. Galileo Galilei was the arch-type of this new school of thinkers. His cardinal rules that science must forever labor independent of authority, and that nothing will answer but personal observation and experimentation in detail, these rules set a standard never yet challenged by his successors. To find out whether things were as stated, such was the new attitude. To probe into matters, lest authorities were misunderstood or themselves deceived; to satisfy the senses wherever possible on a subject of science, and to present carefully the evidence which was used to support a scientific generalization, that was the creed to which all could subscribe as long as facts were detached from faith. Nothing should stand in the way of this plan for action. No opportunity should be lost to enrich human knowledge. No mystery was to deter men from inquiring, or to lull them into the supposition that God had meant man to be ignorant. Nay, nature would be an open book if scientific methods moved unimpeded. All experiences admitted of investigation. Nothing was so sacred but that a quest for truth might justify our utilizing it.

Hence Vesalius did not hesitate to dissect the human body in order to refute Galen. Hence Descartes could proudly point to his rabbits as his best books for the study of anatomy. Hence the rapid progress made in the several sciences, in botany and physiology, in human anatomy and in physics, in astronomy and in mathematics where important discoveries resulted from needs for a precise calculus of matter in motion. Instruments like the microscope and the telescope aided powerfully of course in certain fields, but it was the venture of the student rather than his employment of apparatus that brought unparalleled successes. It was the spirit of the Renaissance, in brief, that gave us a new cosmology and a new philosophy whose by-paths ultimately led to the systematic study of social events.

Environmental Changes.—Instincts and ideas may be considered the chief social forces, even though the external environment accounts for much, even though any phrase like "social forces" is only a metaphor, which begs a question that science has never yet answered. However, it is not to be denied that changes other than those of creed or philosophy or scientific knowledge helped to complete the revolution pictured. Assuredly one may mention again the invention of gunpowder and of printing, and the use of the compass as notable parts of the general metamorphosis. Gunpowder helped to destroy the medieval political order; printing facilitated the education of the masses, besides furnishing experts with a means for preserving their latest cogitations; and the compass, when put into the hands of a courageous mariner, would reveal continents not suspected by the Ancients. In this way certainly a wonderful enlargement of the physical world was made possible. Columbus, in steering for Cathay, guided human enterprise into

channels of trade that made of western Europe a world market. The Mediterranean shrunk to an insignificant inland lake. But the treasures of the Orient were therefore not lost, nor had any change of trade-routes ever brought such wealth to man. Enormous resources exhibited to the explorer's eye! Vast lands thrown open to emigrants and colonizing governments. A long list of new products for popular consumption. Higher levels of living, better housing conditions, more currency and a growing investment fund, such were incidental results of the discoveries. Bio- and agri-culture gained by the contact with other nations as well as by a type of investigation that before the Renaissance was unknown. A better care of animals, breeding and domestication of foreign varieties, the introduction of new fruits and vegetables, selection and grafting, soil studies and farm-management—here were topics that received attention largely because of trading opportunities, or because manufactures began to take rank with agriculture as a mainstay of national prosperity.

Economic organization, correspondingly, underwent far-reaching changes. The medieval guild slowly but steadily lost its place among craftsmen. Independence appealed to artificers and was indirectly fostered by city ideals and the centralization of government. Enterpreneurs began to separate producers of raw materials and the producers of finished goods, while in addition the cleavage line between traders and fashioners stood out more and more distinctly. Production was still by hand, but on a growing scale, and supported here and there by machinery that necessitated the forming of joint-stock companies. Large cities were thus given a start; nations now could comprise millions of inhabitants, all of them subject to one governor, all conscious of one flag and

future. The fate of nations more than ever came to lie in their soldiers. Rivalry of the new kind led to many and prolonged international struggles for power. Money was needed everywhere. Public finance attracted the attention of keen thinkers, and statesmen consequently lent a willing ear to men who proposed to show how the might of the country could be augmented. Was it any wonder that economic thought made headway under such propitious circumstances?

Mercantilism.—Mercantilism and Kameralism are words covering the leading economic ideas of this period between 1500 and 1750, whose scope and arrangement was an earnest of finer things to follow. Mercantilism is best understood as a doctrine to the effect that international trade was decisive for the economy of nations, and that favorable balances (excess exports of merchandise), when settled by cash, promoted the political welfare of nations. Kameralism, on the other hand, refers chiefly to the origin and fiscal interests of public economy, the expounders of this class being guided by a paternalistic idea such as Prussia exemplified during the eighteenth century. Both terms relate to one and the same body of teachings; the difference is not of subject-matter or of underlying beliefs but of aspects, since the one calls attention to theories of wealth and trade, while the other alludes to internal policies and to administration. But what should be especially noted is the absence in all of these works of any attempt at scientific deductions from premises of human nature or of social intercourse. Large libraries were written on money and exchange, on balances of foreign trade and on currency, on value and price, on interest and rent, on population and wages, on the interrelations of farming and labor, on the merits or demerits of patents and like monopolies,

on consumption, luxury, and waste, on tax sources and tax methods; and so on. Not many subjects that were overlooked! Not much fault to find with the standard treatises if we once grant premises and the limitation of data to work with! There was scope and earnestness of purpose, diligence and patience in inquiry, though to be sure also bias, particularly when questions of public policy were involved.

The German Kameralists studied and taught at the same time History, Police, Logic, Jurisprudence, even Metaphysics, very much in the style that Adam Smith delivered his lectures at Glasgow. A close official and sometimes personal relation existed between the scholar and the administration. Works were dedicated to monarchs. The occasion for writing was often a royal wish. Prussian kings founded chairs of Kameralwissenschaft in this spirit beginning with the second quarter of the eighteenth century. A religious note also was at times much in evidence, especially after the Pietistic movement had gained force. Men like Seckendorff, Hornigk, and Thomasius relied upon theistic arguments for support, while Süssmilch hoped to illustrate the beneficence of the deity by demographic statistics.

Germany was the stronghold of this Kameralistic approach, while apparently French and English thought, seeking its own higher level, exercised little influence upon it. The only economic magazine in Germany about the middle of the eighteenth century virtually ignores publications across the Channel. Men like Moser and Möser who give caste to later German Kameralism seem not to be aware of the ideas current in France, which so soon were to be transformed into a solid system of sociological thought. Encyclopedias, commentaries, and indices of Economy begin to appear in the market, but

barring a decided widening of scope the advance is not marked.

As an example of such economic thinking we may mention Justi's "The Principles of Kameralism," 1756. Here we find indications of great erudition, but nothing to suggest the idea of a science dealing with measurable laws of human behavior. What is gained in variety is lost in definiteness of purpose. The first Book deals with the agricultural basis of life and matters of population. The second takes up the technique of farming, industry, trade, and credit. In the third attention is called to educational problems, to religion and ethics; the evils of luxury and unemployment being duly considered. Justice also is viewed from a distributive standpoint, though the thought uppermost in the mind of the writer seems to be a justification of the existing juridical machinery. Finally, in the fourth Book, the argument is concluded with a summary treatment of the principles of jurisprudence, the underlying theory making political economy an art dependent upon state interference for its successful working out. Social phenomena are narrowed down to questions of administration in the belief that this is the central theme of economics. What is needed, we are told, is a sound ideal of citizenship, so the sovereign may use his powers to the best advantage of the state. Otherwise no new principle is introduced into Justi's survey, though in scope and objectivity of treatment it ranks of course high above those of the seventeenth century.

Premises of Economics in Psychology.—However, when Justi wrote his "Principles" other men in France were already laying the foundations for a very different sort of economics. Materials had been gradually piling up that made this not only possible, but one is tempted to say inevitable. So it behooves us, in the first place, to

examine some of the notions fundamental to the rise of an economic science, and in the second place to bear them in mind when following its later development. For there must be no uncertainty about the antecedents of social science, nor should we forget that it sprung from philosophical inquiries in part directly, in part through the intermediacy of psychology and ethics.

Philosophers of the type of Descartes, Hobbes, Locke, Hume, the materialists in France, political theorists in Germany, and moralists in England, these were the men who started economics on its way by closing the gap between free will and natural law that had so long antagonized theology and science. It was felt by the end of the seventeenth century that law reigned everywhere, and that the possibility of systematizing sociological data was not as remote as had been believed. An empirical position was taken with regard to this problem. The achievements of natural science that so startled the world gave a tremendous impetus to inquiries into the nature and limits of knowledge. The rationalists who argued for the necessity of a unifying faculty, for à priori judgments without which experience would be meaningless, or for an absolutist view of reality, of right and wrong, and of truth, could nevertheless not deny the strides made by investigators who ignored the Absolute. Every new discovery of science, every step in the elaboration of the Newtonian system, every advance in the study of human nature fortified the claims of the empiricist. It seemed clear to men, particularly in England, that the assumption of a reality beyond the senses was gratuitous. The belief in super-sensual sources of knowledge was gradually abandoned by the very men who were most instrumental in founding the science of economics. Empiricism held that all the elements of knowledge are post-natally

acquired, and that, whatever such facts might be worth, or whatever their adequacy for the purposes of a metaphysician, they made up the sum total of human wisdom.

For this reason perhaps empiricism contributed most to an inductive logic, to the psychology of sensationalism, but particularly to an analysis of ethics favoring at first individualistic hedonism, and then utilitarianism, i. e., the concept of happiness for the greatest number. In epistemology this led to phenomenalism, with Hume as its chief exponent, and to materialism on French soil. In political philosophy it represented constitutionalism as against the advocacy of absolutism by the rationalists. As exceptions we may mention Hobbes who, though a materialist, espoused the cause of the autocratic Stuarts, and Spinoza and Kant who had a friendly word for popular representation. However, their loyalty to the monarchs of the Enlightenment contrasted strongly with their discourses on government.

But for that matter it was of no great importance whether continental idealists and transcendentalists ruled in either metaphysics or politics, for the origins of economics lay in British empiricism and in French mechanism; nowhere else. The task of sketching the genesis of economics is therefore made comparatively easy, because in noting the ascendancy of Saxon empiricism one has virtually explained all. The first English philosophers and ethicists borrowed freely from Descartes and Gassendi, but the later ones returned with compound interest to France this same principal. Continental European economics, not excluding the developments in Utilitarianism and Marginism, never rid itself of the empirical-phenomenalistic heritage. As will be seen hereafter, a not contemptible portion of what is characteristic in present-day economics, had its inception in

the views of eighteenth century British empiricists. Their psychology provided a basis for ethics, although other ingredients went into it also. In their search for a theory of knowledge they enlarged gratifyingly the existing fund of psychological knowledge, besides laying thereby the foundation for a Logic that in J. S. Mill reached its most perfect and persuasive form. What was expounded in the countless treatises on human nature in those fruitful years has remained up to this date a groundwork for textbooks on price and distribution.

With the Renaissance of learning there came of course also a renewed interest in problems of thought and behavior. What the Greeks had said on that subject served once more as an inspiration for the speculators of the seventeenth and eighteenth centuries. It was apparent from the outset that much had been overlooked, even though a great deal called for a revamping. Descartes here as elsewhere led the van and made noteworthy contributions which, however, need not detain us because they did not as such influence the founders of economics. What continental thinkers brought to light on this matter was little compared to what Englishmen added themselves. Hobbes, who had visited Paris and had met both Descartes and Gassendi, could properly attribute his start in materialism to these two scholars. As materialist, however, Hobbes did not further the cause of economics, and as psychologist he was only a pioneer, the central figure in the whole history of empirical psychology being John Locke.

Still, this much should be said about Hobbes' views on fundamentals of consciousness. He was emphatic in his avowal of a materialistic thesis. He reduced psychics to physics and put up the equation: Notion is motion; that is, matter and motion suffice to explain all experiences.

He begins in his exposition with nerve vibration, which is held to move the minutest particles of neural and cerebral stuff. Contact with the outer world is made responsible for this agitation within. Responses result. Sensations become consciousness, or *are* it. And regardless of what the complexities of consciousness, they are derivable each and all from the first principle announced. Thus in his "Leviathan" which represents mature thought after earlier essays in psychology, he informs us: "The original of them [that is, of our thoughts] all is that which we call sense; for there is no conception in a man's mind which hath not at first, totally or by parts, been begotten upon the organs of sense. The rest are derived from that original." [1]

"To know the natural *cause* of sense, is not very necessary to the business now in hand; and I have elsewhere written of the same at large. Nevertheless, to fill each part of my present method I will briefly deliver the same in this place." [2]

"The cause of sense is the external body or object which presseth the organ proper to each sense, either immediately as in the taste and touch; or mediately as in seeing, hearing, and smelling: Which pressure, by the mediation of nerves and other strings, and membranes of the body, continued inwards to the brain, and heart, causeth there a resistance or counter-pressure, or endeavor of the heart to deliver itself, which endeavor because outward *seemeth* to be some matter without. And this seeming or fancy is that which men call sense; and consisteth, as to the eye, in a light, or color figured; to the ear, in a sound; to the nostrill, in an odor; to the tongue and palat, in a savor; and to the rest of the body,

[1] Quotations are from the first edition of 1651. See Part I, ch. 1.
[2] Ibidem.

in heat, cold, hardness, softness, and such other qualities as we discern by *feeling*." [3]

Only four mental states are recognized, viz., sensation, imagination, memory, and desire, the second and third figuring as "decaying sense." And then we are told that of the two possible kinds of trains of thought sprung from single ideas the "second is more constant; as being *regulated* by some desire and design. For the impression made by such things as we desire, or fear, is strong and permanent, or (if it cease for a time) of quick return." . . . "From desire ariseth the thought of some means we have seen produce the like of that which we aim at; and from the thought of that, the thought of means to that mean; and so continually till we come to some beginning within our own power." [4]

Hence two general facts arise that economists up to J. S. Mill have considered seriously in discussing motives and methodology, namely, in the first place truth consists in an agreement of ideas among each other, not of ideas with things outside as others maintained, and in the second place, desire rests on sensations or a memory thereof, the net result being a moral judgment standardized by society.

Hobbes said: "When a man reasoneth he does nothing but conceive a sum total, from additions of parcels; or conceive a remainder, from subtraction of one sum from another; which (if it be done by words) is conceiving of the consequence of the names of all the parts to the name of the whole; or from the names of the whole and one part, to the name of the other part." [5] And à propos of this it is further remarked: "Cause is the sum or aggregate of all such accidents, both in the

[3] Ibidem.
[4] Ch. 3.
[5] Ch. 5.

agent and in the patient, as concur to the production of the effect propounded, all which existing together it cannot be understood but that the effect existeth with them; or that it can possibly exist if any of them be absent,"[6] . . . a way of looking at the problem of causation that does not differ greatly from J. S. Mill's in his Logic written nearly two centuries later.

As to desire, this is simply a kind of motion "within the body of man," which is commonly called endeavor; and "this endeavor, when it is toward something which causes it, is called appetite or desire; . . . and when the endeavor is fromward something, it is generally called aversion."[7] "But whatsoever is the object of any man's appetite or desire, that is it which he for his part calleth good: And the object of his hate and aversion, evil; and of his contempt, vile and inconsiderable. For these words of Good, Evil, and Contemptible are ever used with relation to the person that useth them: There being nothing simply and absolutely so; nor any common rule of Good and Evil to be taken from the nature of the objects themselves; but from the person of the man, . . . or from an arbitrator or judge, whom men disagreeing shall by consent set up, and make his sentence the rule thereof."[8] In other words, concepts of good and bad are acquired like other knowledge, being usually purposive, and variable for time and place.

There is much in Hobbes' view that Locke, who belongs to the next generation, shared with him; but the differences are no less striking. Hobbes ranked high as systematizer, but evinced little originality. He repeated himself in order to drive home his main doctrines, and

[6] Hobbes, The. Elements of Philosophy, 1655, W. Molesworth edition, 1839, Part I, ch. 6. See also Part II, ch. 9.
[7] Leviathan, Part I, ch. 6.
[8] Ibidem.

moreover repelled readers by his lumbering style both in Latin and in his native tongue. Locke was equally practical at bottom, as his public career proves to satisfaction, but on the whole was more thorough and versatile. Though depending much less upon continental models of thought, he succeeded in making himself clear to a large circle of readers. He greatly improved the psychology of his older compatriot. His influence was enormous and affected the political events of two continents. He took his time in meditating over abstruse questions. He waited twenty years before giving his "Essay Concerning Human Understanding" to the world (in 1689). His main aim is to reveal the roots and limits of knowledge, not to clarify ideas on passions and ethics. He does away with the argument for innate ideas, and in the fourth book of his Essay enters cautiously upon his central topic.

In general he adheres to sensationalism, but adds that reflections, being "the perception of the operations of our own minds within us as it is employed about the ideas it has got, which operations, . . . do furnish the understanding with another set of ideas which could not be had from things without" [9] must be distinguished from sensations directly traceable to outside stimuli. All ideas are thus derived from sense or from reflection. Simple ideas become complex "by combining several simple ideas into one compound," [10] or through like processes. Through association ideas are built into more or less regularly recurring and compact groups of thought, and through wrong associations many errors arise, as for instance superstitions and fallacies in argumentation.

[9] Locke, J. Essay Concerning the Human Understanding, 1689, Book II, ch. 1, § 4.
[10] Ibidem, ch. 12, § 1.

But what is here more to the point, Locke not only repeats Hobbes' view that truth consists of an agreement between ideas merely—thus adopting phenomenalism [11]—but furthermore proclaims the certainty of moral truths derived indirectly from reflections. For: "Complex ideas, except those of substances, being archtypes of the mind's own making, not intended to be the copy of anything, . . . cannot want any conformity necessary to real knowledge." [12] "And hence it follows that moral knowledge is as capable of real certainty as mathematics." [13] Indeed, "truth properly belongs only to propositions," [14] either as in logic, the demonstrative science, or as in mathematics and ethics, the intuitive kind of knowledge, all the rest being empirical and no more than probable knowledge such as is gathered by natural science.

Now, in this conception of the laws of thinking and feeling Locke was followed quite closely by David Hume, although there confronts us again a change of classifications and of terms. For instance, Hume distinguished between impressions and ideas, his "Treatise of Human Nature," written when he was scarcely twenty-five years old, commencing with this thought upon which so much was made to rest. "All our sensations, passions, and emotions," he says, are impressions, while "the faint images of these in thinking and reasoning" constitute the idea. Every simple idea springs from an impression, while complex ideas, developed from them in the style described by Locke, may originate also from other ideas, instead of from impressions. Besides, impressions "may be divided into two kinds, those of sensation and those of

[11] Ibidem, Book IV, ch. 4 § 5.
[12] Ibidem.
[13] Ibidem.
[14] Ibidem.

reflexion," the latter being "derived in a great measure from our ideas, and that in the following order: An impression first strikes upon the senses and makes us perceive heat or cold, thirst or hunger, pleasure or pain of some kind or other. Of this impression there is a copy taken by the mind, which remains after the impression ceases; and this we call an idea. This idea of pleasure or pain, when it returns upon the soul, produces the new impressions of reflexion, because derived from it. These again are copied by the memory and imagination and become ideas; which perhaps in their turn give rise to other impressions and ideas. So that impressions of reflexion are only antecedent to their correspondent ideas; but posterior to those of sensation, and derived from them." [15]

Locke's argument on laws of association as the key to chains of reasoning is, conformably to this view, accepted almost in its entirety. Hume, in order to round out his phenomenalistic sweep, has merely to add that this principle, conjoined with that of "a like association of impressions," opens the way also for a science of morals, in that the interactions for all cases are of like nature. "There is but one kind of necessity, as there is but one kind of cause, and the common distinction betwixt moral and physical necessity is without any foundation in nature." [16] Natural and social sciences move, in this sense, on one level. Causation becomes a purely conceptual thing, and mathematics similarly merely a demonstration from premises arbitrarily posited. For the rest, there are probabilities, but not certainties. All knowledge is illusory, however definite our feeling about the environment that the senses bring

[15] Hume, D. Treatise of Human Nature, 1739. Edition by Selby-Bigge of 1888; Book I, Part I, § 2.
[16] Ibidem, Book I, Part III, § 14.

us in touch with. Metaphysics could not explain what experience left doubtful as a matter of logic.

Premises of Economics in Ethics.—Herein then lay also the reason for the ethical, as contrasted with the epistemological, skepticism of the empiricists. It was not surprising that a matter-of-fact attitude should resolve moral values into routine appraisals of a practical-minded man, thus forcing economics in the end to an admission either that economics *is* ethics, or that ethics is not part and parcel of science at all, but rather a mode of speculation that must be kept quite distinct from purely descriptive analysis.

Furthermore, ethics before the nineteenth century lacked the support that an accurate knowledge of biology and social processes might have given. It was still the age of introspection and deductions from theorems pertaining primarily to the problem of reasoning. If Christian influences therefore did not predetermine ethical precepts, or metaphysical idealism forestall a pragmatic version, a common sense standpoint was most natural. Men consulted their own innermost thoughts and arrived thence at certain conclusions. The period of the Enlightenment was prone to look at itself by way of self-criticism. Memoirs and autobiographies penned with brutal frankness, classification in utmost detail that extended even to the realm of art, notably of painting, sightseeing tours to learn of other people's manners from a discriminating angle, such were diversions fashionable at a time when leisure was still respected and a pension or sinecure the normal goal of many a distinguished intellect. The relative place of nature, man, and mind was the subject of profound musings. A reconciliation of opposites seemed imperative, and with the aid of pagan thinkers the task was bravely begun.

It would of course be too much to say that the Greeks furnished the age of Enlightenment with the ideas back of the "Wealth of Nations" or the gospel of hedonism. Such direct and unqualified approval was quite out of the question, partly because modern science and psychology provided enough new material of their own, and partly because Christian ideals after all exerted a powerful influence upon minds of every shade of philosophical opinion, upon empiricists and phenomenalists no less than upon the rationalists of the type of Leibniz and Kant. However, there remains the fact that the Renaissance revived Greek ethics as well as Greek metaphysics and art, and that the reprints in the original, with copious commentaries, of the Greek treatises gained vogue among thinkers who, indirectly, were the fathers of economics.

The ethics of Plato and Aristotle was less influential, so far as the development of economics is concerned, than the doctrine of their successors. It was the product of Greek skepticism that the eighteenth century could best appreciate—the philosophy of disappointment and of negation that the political and intellectual history of Greece so naturally led up to, even if it was not the primary cause of it. What Epicurus and Zeno had preached was more easily understandable (at least in its original form) than what more systematic thinkers like Plato or Aristotle expounded in terms far removed from the commonplaces.

The two main schools of Greek ethics that dominated ancient thought up to the fall of the Roman empire both had something to give to a modern age in which mechanism and teleological notions, deep religious fervor and cold rationalistic temper existed side by side, not only in the minds of humble folk, but particularly in the world of research and meditation.

Both Epicureanism and Stoicism sprang from materialism. Both might have claimed Protagoras and Democritus as their intellectual godfathers. In both schools knowledge was traced to the senses, and happiness sought as the chief aim in life. So that, to begin with, they united in rejecting the ideal of absolute truth, of perfect virtue, of goodness based on knowledge, or realities transcending the results of perception. However, here the resemblance stopped, for the Epicureans made happiness a self-sufficient reward of their endeavors, while the Stoic doctrine sought happiness chiefly as a by-product of uncompromising virtue. What is more, according to Epicurus pleasure itself was good, and pain bad, and though the elevation of mind was by no means scorned, the main trend was toward creature comforts. It was pleasure of the self that Epicureanism aimed at, pleasures varying in quantity merely, the duration of pleasure counting more than its intensity at the moment. To achieve happiness in this sense, therefore, wants had to be multiplied. The normal thing to do was to cater to wants, to add to their variety, and to take care that the human will was employed to this end. In spite of a materialistic undercurrent, consequently, the volitional aspect of life received much attention. What happened here on earth counted most of all. An essentially non-religious attitude was assiduously cultivated, the general result of which was a struggle said to go on between man and nature, since man had to labor in certain ways to gain contentment.

The Stoics, quite to the contrary, extolled the advantages of an ascetic spirit. They agreed that happiness was the desideratum, but in making it an incident to unalloyed virtue they turned their back on the quantitative interpretation of values. It was the quality of pain

and pleasure that mattered decidedly. Peace would fall to those solely who learned how to renounce, how to abstain and explain away the necessity of things. The fewer wants, the nobler the victory, so we are told. In a mood of resignation, thus, Stoicism passed over to a kind of fatalistic belief. For all their preachments of a God and of a Purpose, they bowed to Fate. And with this attempt at an all-embracing outlook there came the union of reason and morality. To the Stoic, God was in nature; pantheism seemed alone satisfactory. And again, nature betokened reason, while virtue in turn was obtainable only through a conscientious application of reason. Hence God, reason, nature, and law became all one. What ruled in the universe was a mighty single principle. The emanations of the human mind at their best could not but reflect the greater spirit ruling without. Man and nature were one. To understand ourselves we needed the outside world to instruct us. It was evident that nothing was gained by pitting feeble man against irresistible forces about him.

Contrasting the two viewpoints in this manner one cannot guess at once which of the two would satisfy best the needs of a social science. It is not by weighing the relative merits of the two that we find their place in modern thought, but by remembering that Christianism reigned everywhere in Europe, while, as regards the practical side of a theory of conduct, much could be said in favor of one of the doctrines, and little for the other. So it came about—one is inclined to add logically—that the Stoics colored political philosophy, while the Epicureans found friends mainly among out and out economists. At any rate, what the seventeenth and eighteenth centuries said on government and international law hearkened back to ancient Greek and Roman Stoicism; but

what impressed the sensationalists in England was for the most part the hedonism of Epicurus. Monotheism among the clergy and many of the Transcendentalists was not to be sullied by the implications of the Stoics, implications that were of oriental design anyhow, and ran directly counter to the Nicæan Creed. So it seems reasonable that continental thinkers like Descartes, Geulincx, Malebranche, Arnauld, Pascal, Bossuet, Spinoza, Leibniz, Thomasius, Wolff, and finally Kant grounded their ethical systems on Plato, Aristotle, or the Bible alone. Adam Smith himself, though hostile to sheer utilitarianism, disapproved at the same time also of Stoicism.

Yet the Physiocrats incorporated Stoic teachings in their economics by way of political philosophy, uniting nature and man, while Epicureanism came to power in the second stage of economic growth, when Smith's system was transformed into Utilitarianism. As will become apparent later on, this switching from stoically to hedonistically tinged economics was one of the chief changes occurring between 1776 and 1836 when Senior published his article on economics in the Metropolitana.

The beginnings, however, lie again in Hobbes, just as in matters of psychology and logic. For Hobbes was the first British writer to profit by the revival of Greek sensationalism in France during the first half of the seventeenth century.

Incidentally speaking, Hobbes, of course, applied his philosophy to practical questions of politics. It was natural for him to trace a relation between materialism and hedonism on one side, and between both and a theory of absolute government on the other side. He was convinced that men were alike in fundamentals, and needed a strong arbiter to keep them orderly. He believed in the

genuineness of a compact between people and ruler, and saw no promise of a millennium so long as human beings were fundamentally selfish. In his own words ("Leviathan, or the Matter, Form, and Power of a Commonwealth Ecclesiastical and Civil," 1651), "Nature hath made men so equal in the faculties of body and mind" that, though some differences exist, "the difference . . . is not so considerable as that one man can thereupon claim to himself any benefit to which another may not pretend as well as he." [17] So, "from this equality ariseth equality of hope in the attaining of our ends; and therefore if any two men desire the same thing, which nevertheless they cannot both enjoy, they become enemies." [18] The result is a war of all against all; for it is "a general rule of reason that every man ought to endeavor peace, as far as he has hope of attaining it; and when he cannot obtain it, that he may seek and use all helps and advantages of war." [19]

It was this sort of an appraisal that made Hobbes an outspoken opportunist in matters moral. He assures us: "No man giveth but with intention of good to himself; because gift is voluntary; and of all voluntary acts the object is to every man his own good; of which, if men see they shall be frustrated, there will be no beginning of benevolence or trust, nor consequently of mutual help . . . "; [20] and so on. Indeed, it is characteristic, and deserves mention even at this point in our investigation of economic history, that Hobbes attributed commerce entirely to motives of mutual benefit, and this from a standpoint close to the Marginal! Thus he writes: "The value of all things contracted for is measured by

[17] Hobbes, Leviathan, ch. 13.
[18] Ibidem.
[19] Ibidem, ch. 14.
[20] Ibidem, ch. 15.

the appetite of the contractors; and therefore the just value is that which they be contented to give." [21] And again it is in keeping with this prosaic view of human nature that he informs us: "Moral philosophy is nothing else but the science of what is good and evil in the conversation and society of mankind. Good and evil are names that signify our appetites and aversions; which in different tempers, customs, and doctrines of men are different." [22] Even the Stoic law of nature is reduced to a hedonistic terminology, for we read that, while "the true doctrine of the laws of nature is the true moral philosophy," [23] a "law of nature is a precept or general rule found out by reason, by which a man is forbidden to do that which is destructive of his life, or taketh away the means of preserving the same; and to omit that by which he thinketh it may be best preserved." [24] So all judgments are relative both as between nations or individuals, and as between one situation in which any one of us may find himself, and a second situation. Values are always pragmatic. Nothing sums up more concisely Hobbes' view of ethics than his remark: "There is no such . . . Summum Bonum as is spoken of in the works of the old moral philosophers," [25] a sentiment shared, as was the bulk of his moral outlook, by John Gay when he wrote: "Obligation is the necessity of doing or omitting any action in order to be happy." [26]

Now, Locke was a good bit of a hedonist in the eighteenth century sense of the word, but like most of the empiricists following Hobbes he refused to accept a coldbloodedly individualistic standpoint. He tells us in

[21] Ibidem.
[22] Ibidem. See also ch. 6.
[23] Ibidem.
[24] Ibidem.
[25] Ibidem, ch. 11.
[26] Gay, J. Preliminary Dissertation: Concerning the Fundamental Principles of Virtue and Morality.

his Journal that no doubt man lives mainly to obtain "the happiness this world is capable of, which is nothing but plenty of all sorts of those things which can, with most ease, pleasure, and variety, preserve him longest in it"; but his whole theory of sensationalism leads toward a social interpretation of pleasure. Ideas of approval figure prominently in Locke's experiences. What we think of people, and how we react to their disapproval, constitutes necessarily a part of the associations that are built into creeds and proofs. Precisely in this sense "delight or uneasiness," he remarks, "join themselves to almost all our ideas of both sensation and reflection; and there is scarce any affection of our senses from without, and retired thought of our mind within, which is not able to produce in us pleasure or pain." [27]

The connection, thus, between Locke's view of knowledge and his view of ethics can hardly be misunderstood. The one logically leads to the other. It is as Locke writes in a significant paragraph: "Amongst the simple ideas which we receive both from sensation and reflection, pain and pleasure are two very considerable ones. For as in the body there is sensation barely in itself, or accompanied with pain and pleasure, so the thought or perception of the mind is simply so, or else accompanied also with pleasure or pain, delight or trouble, call it how you please." [28] Ethics is "the seeking out those rules and measures of human actions which lead to happiness, and the means to practice them"; [29] but "things are good and evil only in reference to pleasure and pain," [30] so that ideas, memories, and associations are of primary importance.

[27] Locke, Essay Concerning Human Understanding, Book II, ch. 7, § 2.
[28] Ibidem, Book II, ch. 20, § 1.
[29] Ibidem, Book IV, ch. 21.
[30] Ibidem, Book II, ch. 20, § 2. For Locke's definition of pleasure, pain, and happiness see ch. 20, § 15, and ch. 21, § 42.

The social, or the universalistic phase, as it has by some been called, of ethical empiricism was taken up again by Hume in his inquiries into the problem of knowledge; and this time the irrationality of morals becomes evident enough. It is not altogether a matter of ideas or impressions, we are assured. The intellectualistic theory of feelings will not in itself suffice to explain the whole situation. Even though stimuli and feeling, painful remembrances and moral judgments are closely related, further items deserve mention. On the one hand, Hume informs us, "it is easy to observe that the passions, both direct and indirect, are founded on pain and pleasure, and that in order to produce an affection of any kind, 'tis only requisite to present some good or evil. Upon the removal of pain and pleasure there immediately follows a removal of love and hatred, pride and humility, desire and aversion, and of most of our reflective or secondary impressions." [31] But on the other hand feelings spring from a variety of sources, not all of which affect our fellowmen equally. "For we reap a pleasure from the view of a character which is naturally fitted to be *useful* first to others, or secondly to the person himself, or which is *agreeable* first to others, or secondly to the person himself." [32] What is more, "the mind by an original instinct tends to unite itself with the good, and to avoid the evil, though they be conceived merely in idea, and be considered as to exist in any future period of time." [33] Or to put it differently: "Moral sentiments may arise either from the mere species or appearance of characters and passions, or from reflections in their tendency to the happiness of mankind, and of particular persons." [34]

[31] Hume, Treatise, Book II, Part III, § 9.
[32] Ibidem, Book III, Part III, § 1.
[33] Ibidem, Book II, Part III, § 9.
[34] Ibidem, Book III, Part III, § 1.

As will be seen from Chart One the development of British utilitarianism, as *ethics,* can be indicated only by reference to many writers, there being a natural line of division between empiricists proper and intuitionists who believed in an innate sense of right and wrong; but beyond that distinctions involve considerable attention to details. Whether a theistic concept or a resort to conscience or a sociological view preponderates in any particular work it is sometimes impossible to tell. We feel only, as in the case of Hume, that sensationalistic psychology is not consistently, or not exclusively, employed as a key to morals. Virtue according to Hume, for instance, might not be natural—so that both intuitionists and Stoics are wrong—but neither do sense experiences meet every question. Indeed, in combating Mandeville, the author of the "Fable of the Bees, or Private Vices, Public Benefits," 1714, who sermonized on the merits of elegant leisure procured at the expense of the common man's toil—in warning against this fallacy Hume was impelled to make much of a spectator within us, somewhat in the manner ordinarily associated with Adam Smith.

Various British moralists endeavored thus to give hedonism a social value, Cumberland, Tucker, and Paley relying upon reason, just as Locke had done, while Hume, Smith, and Ferguson pointed to benevolence or sympathy, that is to the sentimental side of human nature.

To illustrate with a few instances apart from what has been said about Hume.

Cumberland in 1672 wrote: "The greatest benevolence of every rational agent toward all the rest constitutes the happiest state of each and all of the benevolent, so far as it is in their own power; and it is necessarily requisite to the happiest state which they can

Chart One — Genealogy of British Utilitarianism

attain; and therefore the common good is the supreme law." [35] From the Third Earl of Shaftesbury whose "Characteristics" were as original as they proved influential, this: "If by the natural constitution of any rational creature the same irregularities of appetite which make him ill to others make him ill also to himself, and if the same regularity of affections which causes him to be good in one sense, cause him to be good also in the other, then is that goodness by which he is thus useful to others a real good and advantage to himself. And thus virtue and interest may be found at last to agree." [36] And from Hutcheson, the immediate predecessor of Smith in the theory of ethics: "the origin of moral ideas is the moral sense of excellence in every appearance or evidence of benevolence." [37] The creator of the world "has given us a Moral Sense to direct our actions and to give us still nobler pleasures, so that while we are only intending the good of others we undesignedly promote our own greatest private good." [38]

To give these disquisitions on moral sense and acquired moral sentiments their proper value it should be remembered that Smith as the founder of Naturalistic economics in England followed the ethics of Hume and Hutcheson, adding, to be sure, his own theory of sympathy. In its beginnings British economics thus was non-hedonistic. But under Ricardianism a decided change takes place. From there on the hedonistic-utilitarian concept dominates economists both on the continent and across the Channel, so that Sensationalism necessarily forms a part of our historical survey.

[35] Cumberland, R., quoted by De Laguna, Th., in his Introduction to the Science of Ethics, 1916, p. 193.
[36] Edition of 1699, vol. 2, Inquiry Concerning Virtue and Merit.
[37] Inquiry into the Original of Our Ideas of Beauty and Virtue, 1720, vol. 2, p. vii.
[38] Ibidem.

But à propos of this optimistic view of human nature entertained by the Moral Sense philosophers, was it any wonder that economics started with free-trade doctrines? Let us ponder on the following from Ferguson, the author of "Institutes of Moral Philosophy," 1767: "The effect to mankind should be the same, whether the individual means to preserve himself, or to preserve his community." [39] "The interests of society . . . and of its members are easily reconciled," [40] since "love and compassion are, next to the desire of elevation, the most powerful motives in the human breast." [41] Wasn't this what some Physiocrats believed, and what especially Voltaire, in his unbounded admiration for Saxon genius, echoed in the words: "It is self-regard that also promotes the interests of others. Thanks to our mutual needs we help one another; and this is the basis of all trade, of all social solidarity"? [42] The identity of personal and national interests seemed thus proven to men who had no particular economic issue to meet.

Naturalism.—The originators of this notion as well as of the Moral Sense were the Stoics whose naturalistic philosophy permeated a great part of seventeenth and eighteenth century literature. Naturalism was the sequel to dogmatism of the ecclesiastical sort. With the wane of faith in a transcendent God, mysteriously functioning in a trinity, it was not difficult for thinkers to bring God to earth through nature herself. It was shown that nature is not sinful but wholesome, that man could not be fundamentally bad since God had made him as He had created heaven and earth, and that the con-

[39] Ferguson, A. Institutes of Moral Philosophy, edition of 1767, Part II, ch. 2.
[40] Ferguson, A. Essay on a History of Civil Society, Part I, ch. 9.
[41] Ibidem, Part I, ch. 6.
[42] Quoted by Luthardt, D. Chr. E., in his Geschichte der Christlichen Ethik, 1893, p. 464.

crete things of daily experience were as fit to reveal God as the sublimest miracles of the Church. In short, the pre-Christian view of God and universe was revived. Platonic idealism was dropped as unnecessary to our understanding of religion. What was unintelligible in dogma was largely discarded, and what science had said about a new cosmology did service as proof for Immanence. God was everywhere. The cosmos itself incorporated a divine plan, a product of reason whose replica was the human mind.

From this standpoint then the mechanistic presentation of the world was plausible. One could easily lose sight of a process of means and ends such as orthodox Christianity preached. One could depict life as in a stationary, finished state, minimizing the difference between hell and heaven. What evidently accorded most with the achievements of modern science was the depersonalization of God, i.e., the identification of God with nature in all its details, and the fusion of reason with virtue.

Guided by the Stoics the modern philosophers thus drifted toward a naturalistic, static conception of human institutions. A state of nature was preached in which peace reigned (though exceptional writers like Hobbes imagined just the opposite), and the creatures of the earth lived in perfect adaptation to their environment. Beast and man alike could not but conduct themselves otherwise than was conducive toward their welfare. Instinct was but the affective side of reason, actions giving effect to what the former two had urged. Man was social by predisposition, and in the long run behaved so as to enhance the fortunes of his comrades, no matter what moved him in his projects. As long as reason presided men had nothing to fear from their own kind. What had gradually, and periodically, brought about a state

of misery among men was their own falsification of nature's dictates. Institutions were subject to errors, and these would have to be corrected if progress was to be permanent; but things would right themselves naturally also, since God had meant human beings to be worthy of His designs.

A variety of principles were deduced from this main proposition, such as the possession by man of certain inalienable rights of a political sort, his title to self-government within liberal bounds, his erection of governments on prearranged terms, a contract being drawn up to define the mutual rights and duties of governor and subject. Legislatures had powers to regulate many things, but in all cases the human law, whether military or moral or economic, was but a reflex of an underlying larger rule laid down by God. Or if it was not, misfortunes were impending; for what was unnatural was thereby immoral, and what was immoral was certain to perish in time.

There were men of course who ridiculed the idea of a government by contract; men like Hume, Blackstone, and later on Bentham. The sensationalistic-utilitarian psychology did not need a social order established through the artifice of a compact. And there were also prophets who turned Naturalism to strange uses in education and etiquette, Rousseau being the most celebrated instance of this other cry of a "return to nature." One need not wonder at such applications of a mighty concept, if one remembers the circumstances of the time, the decadence of morals and manners, the approach to bankruptcy of kings and courtiers, and the dissatisfaction prevailing among thoughtful men and women in various walks of life. But at the core Naturalism was an abstraction calculated to systematize a litter of facts and fancies per-

taining to moral philosophy. The burden of Naturalism was the desire to describe human relations so as to make life rational and virtue practicable. An imposing array of arguments was gradually brought together to convince readers. In several fields men labored to find a substitute for a crumbling creed. Richard Hooker, whose great work on the "Laws of Ecclesiastical Polity" appeared in 1594, Althusius and Grotius, Locke and Montesquieu and Rousseau, Pufendorf, Burlemaquai and Vattel—they each and all expounded Naturalism. Christianity by the Deists was proven to be as rational as self-protection. Revelation now turned out to be no more than an axiomatic truth. The Scriptures were vindicated in new style, and doubters shown to be arrant knaves or doddering fools. It is symptomatic of the vogue of Naturalism, and of the grip it had on professional minds, that as staunch a utilitarian as W. Paley should write (even in 1785): "Moral philosophy, morality, ethics, casuistry, natural law mean all the *same thing*, namely that science which teaches men their duty and the reasons of it." [43]

The best use of Naturalism was, however, made, not in ethics, but in politics where popular interest was so much more lively. It was here that the times were especially ripe for a close-knit web of theories, and it was here that empiricism once more carried off the palm of victory, securing public approval when idealistic men like Spinoza or Kant could hardly make themselves heard.

Political philosophy gained in the eyes of the people chiefly because great issues were being fought between ruler and the ruled.

Since the Renaissance powerful nations had come into

[43] Paley, W. Principles of Moral and Political Philosophy, first edition, Book I, ch. 1.

being. Millions of inhabitants swore allegiance to one flag. Hundreds of thousands of square miles of land had come under the scepter of this or that dynasty. The long struggle against the papacy had compelled Protestants to find defense for their impious deed. Secular power had to be declared independent of the clerical, and if convenient even exalted at the expense of the citizen. A divine-right theory of kings was thus forged by degrees out of pieces furnished by the New Testament and the Church itself during the Middle Ages. Monarchs everywhere had exercised despotic powers, and on the European continent clung to them for many generations.

Yet a reaction against this exaltation of the Crown set in among certain religious sects. Calvinism and Independentism meant self-determination in more senses than one. Recalcitrant kings who would not espouse the cause of great religious reformers were anathematized and—metaphorically speaking—deposed. In France the Huguenots, in England the Puritans and minor sects, in the Netherlands nationalists raised the banner against absolute dominion. Taxes furnished a welcome bone of contention. Personal government was decried and responsibility to the people deemed imperative. First the revolution of the Netherlands in 1579, which was expressly justified by reference to a social compact; then the constitutional battle in England, the final episode being the writing of the Bill of Rights in 1689 and the Act of Settlement a few years later; then the revolt of the American colonies under cover of the Rights of Man; and last not least the French Revolution which gave the *coup de grâce* to so many European survivals of the Dark Ages!

It is not hard to see that Naturalism could give an air of irrefutable logic to such events, to the demands

actuating pamphleteers, political leaders, or idols of the mob. The thought that nature had made all men equal, and endowed them with the inviolable right of pursuing happiness, this slogan had force when motives were not lacking. The dictum of Rachel in his "Law of Nature and Nations," 1676, that "since man is constituted by nature a social animal, and it is his peculiar task to live according to reason so that in civil life he may find constant occupation in well-doing, Divine Providence has prescribed rules of life which are the best suited to his rational and social nature, and these are the very rules of nature . . . ,"[44] this viewpoint paved the way for Locke's "Essay on Government" of 1690, in which constitutionalism won its finest victory. From then on the future of popular sovereignty was assured.

Furthermore, by means of this specialization social science itself benefited appreciably, for ere long the difference between jurisprudence and kameralistic studies became apparent. If the stoic philosophy was used to sanctify paternalism, it also gave a mighty impetus to international law to "the law of nations," as it was at first baptized. Ethics eventually was separated from jurisprudence, and both from economics. A subdivision of inquiries went on during the eighteenth century that helped to determine the form of Smith's "Wealth of Nations."

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Statistics and Historiography.—But finally, something had likewise been contributed by statisticians and historians. Much valuable material in the earlier literature of economics had been garnered by these investigators who, while faithful workers in quest of truth, were

[44] Rachel, S. On the Law of Nature and Nations, 1676, edition of Carnegie Institution of Washington, D. C., 1916, vol. 2, p. 8.

certainly not familiar with the reasoning of psychologists or of Physiocrats.

In its first stages statistics, to be sure, meant no more than a collection of facts relating to politics. Data were compiled to reveal the military or economic powers of a state, comparative studies taking the name of Cosmography. The growth of nations and the mercantilistic policy of statesmen lent interest to such investigations. Resources were catalogued and brought to the reader's attention so as to appeal to his patriotism. Physical and commercial geography came in for their share of consideration, though not infrequently accuracy was sacrificed for the sake of impressiveness. In England Harrison's "Description of England," 1577, is a fair type of what statistics include at that time, and what in the compiler's opinion the people wanted. On the continent the "Respublicæ Elzeviranæ" of Leyden by Holland publishers (1626–) were widely known and used, some sixty states being comprised in the collection. The German Kameralists wrote bulky tomes on "Staatsbeschreibung," that of Conring, 1660, being especially well received. Thomasius, the chief exponent of German Rationalism in those days, not only was the first to dare use his mother tongue in lectures at the University of Leipzig, but also introduced in 1694 Statistics as one of his regular courses. Still later Achinwall (1749) published his "Outlines of the New Political Science," in which the description of political facts was subordinated to an historical treatment; while in England Salmon's "Present State of All Nations" had long circulated as a work of distinct merit.

Demographic records, too, became plentiful about this time. The oldest official data, namely church registers of birth, death, and marriage, were preserved with a grow-

ing appreciation of their value for future generations, and clerks put in charge soon after the Reformation. Vital statistics in general were first compiled in Spain at the end of that century, though no systematic inquiries appear to have been made until much later. It was the age of the Enlightenment that set a good example here as in other things, and gave to statistics at once a standing among other fields of investigation. In Prussia the first census dates from 1719. Nearly a hundred years later the bureau was reorganized and put on a permanent basis—possibly another one of those efforts made at that time to infuse life into a nearly defunct state, whose very existence depended on the goodwill of Napoleon. In France the beginnings were equally humble and devoid of immediate results, but by 1820 this branch of the public service had been definitely recognized as important for many governmental needs.

Apart from official undertakings, however, those of a private origin must be considered, and these take us back far into the seventeenth century. England once more seems to have led the way. It was there that Graunt, 1662, published his "Natural and Political Observations Upon Bills of Mortality." It was there that Halley, the discoverer of the comet named for him, gave out his figures on death-rates and population in 1693. King's and Petty's tables gained recognition at once and served as an incentive for similar studies by German economists. In 1698 we hear of a life-insurance company founded for the purposes of protecting individuals against risks through death. Population was watched increasingly as an index of prosperity and national power, the pessimistic attitude of Malthusian days being as yet unknown; for there was enough to eat, and manufacture still played a minor rôle in national life. Indeed, on theological

grounds the movements of population were regarded as a sign of divine intentions, as for instance in the "Betrachtungen über die Göttliche Ordnung in den Veränderungen des Menschlichen Geschlechts" (1767) by J. P. Suessmilch. In other words, statistics had not so far been treated as an exact science, following principles of logic and mathematics, but rather as a field for information that might prove suggestive to monarchs and tax collectors. The state almanacs appearing from 1700 on answer this purpose, as well as periodicals and textbooks for collegiate use, which by the middle of the century had reached quite a finished form.

Still, it may be argued that precision was aimed at more and more, and that mathematicians by their treatises on probability did give a fillip to statistical interests. For while mathematics was not indispensable to a thorough cultivation of the field, it could not fail to economize labors or to corroborate inferences from particulars near at hand. Assuming a given number of variables, laws of recurrence could be stated quantitatively, per block of events, per class, or per unit of time. And it deserves noting that mainly on this account statistical investigations strengthened a belief in social laws which govern human events, just as physical events were already known to obey laws. Thus the calculus of Newton and Leibniz bore indirectly upon the rise of social science. Thus Pascal's and Fermat's books on probability in games of chance, published in 1660, stimulated statistical inquiry. Thus Bernouilli's "Ars Conjectandi" of 1713, and the later publications of Euler, were in keeping with tendencies of the time.

Historians, on their part, kept abreast of events by widening their field, by subordinating chronology to synthetic accounts of the past, by searching for a unifying

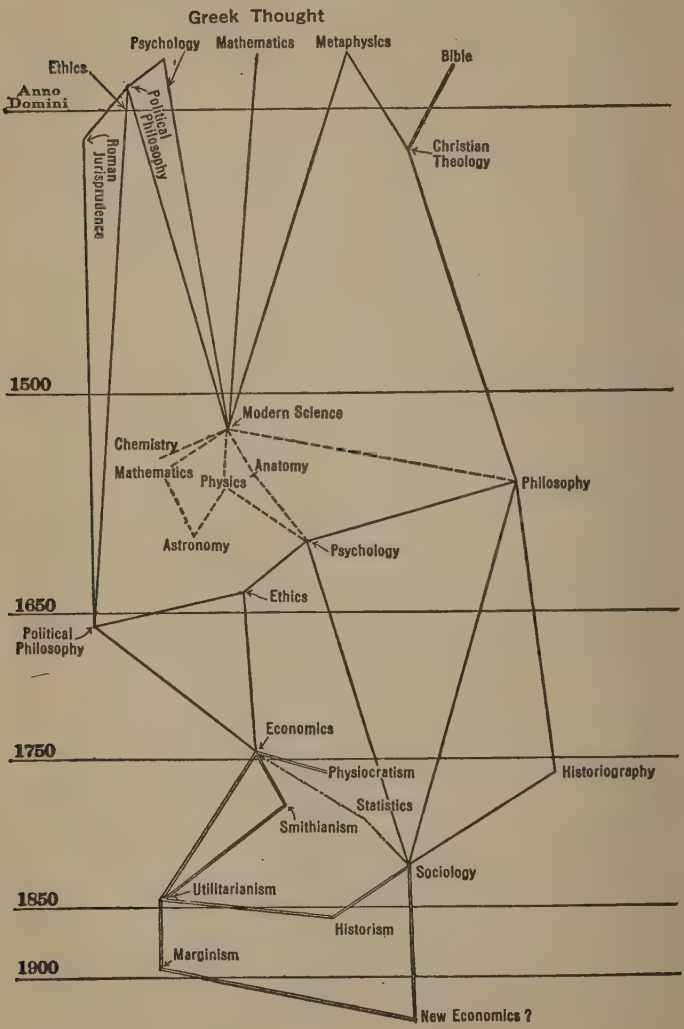
principle back of human records. The Renaissance furnished the raw materials for the new science; the seventeenth and eighteenth centuries turned out finished products that, in some cases, were worthy to be ranked with the best of our own age.

However, it was the rationalistic temper of these histories rather than their contents that must impress us; and it was the idea of a philosophy of history that most of all prompted men to study the socio-economic aspects of human evolution. Pioneers like Bossuet, Vico,[45] and Montesquieu for this reason exerted an influence upon the founders of economics. Adam Smith had good precedents when he devoted a large portion of his "Wealth of Nations" to a resumé of former economic systems! To sum up long periods of time under a single viewpoint was no longer a novelty in his day. In France Turgot had published his "Successive Advances of Human Nature," 1750; Voltaire several comprehensive histories including his "Essay on Morals and Customs," 1756; and Condillac his "Universal History" in 1775. Among English works deserve notice Ferguson's "Essay on the History of Civil Society," 1767, and preëminently, of course, Gibbon's "Decline and Fall of the Roman Empire," the first volume of which appeared in 1776. Germany also could point to meritorious works, for instance to Iselin's "Philosophical Speculations on a History of Mankind," 1764; to Schlozer's "General Scandinavian History," 1772, which at the time enjoyed great popularity; to Wegelin's "Memoirs on a Philosophy of History," 1776, and to the essays of Möser, Lessing, and Herder who combined literary excellence with loftiness of thought.

Genealogy of Social Science.—Without going further

[45] See his Principes de la Philosophie de l'Histoire, translated from the Italian by Michelet, J., 1835. Vico frankly admits his indebtedness to Hugo Grotius, the Dutch jurist.

Chart Two—Genealogy of Social Science



into this side of the genesis of economics, one cannot help being struck with the abundance of materials that had by 1770 been laid up, ready for anybody that should wish to convert economics into a science. A long period of preparation was at last to bear fruit. As the accompanying chart will show at a glance, the ultimate sources of economics are to be sought in Greek philosophy; but, more precisely taken, the antecedents lie in the two centuries following the Renaissance. Christian theology proved of no import, though it did influence modern ethics. On the other hand modern science, especially through the researches that culminated in the Newtonian system, was the direct occasion for men's asking whether physics and psychics might not be linked by a common principle in law and logic. With the aid of these data psychology opened up new vistas, and ere long provided a basis for a theory of knowledge as well as for a theory of ethics. Together these lines of investigation forced upon able thinkers the conclusion that the study of the social environment was worth while, that master principles might be unearthed, that rules might be prescribed for the furtherance of public well-being, and for the moral elevation of individuals. *De*scription and *pres*cription were not as yet rigidly sundered, though the possibility suggested itself. What was evident, however, was the growing desire to compete with physicists and mathematicians. Both in France and in England men arose who attacked this problem, thereby launching a new science, to be known as economics.

CHAPTER THREE

NATURALISM (Continued)

II. Physiocratism

Underlying Ideas.—The Physiocrats, or Economists as they called themselves with a certain pride in their work, may justly be considered the founders of economics because they were the first to study social processes from the standpoint of law and causation, exactly as Newton, for example, had done in another field. They applied to the body politic what English empiricists had originally tried to discover in individual human nature, namely a principle of regularity in the occurrence of events, according to which they might be connected and perhaps predicted just as astronomers had explained the varied phenomena of the heavens. It was shown that wealth circulated and satisfied several requirements essential to national welfare, the inference being at the same time that something definite might be done to promote this tendency toward growth and progress. Not that all members of the Physiocratic group held the same opinion in details, but rather that they shared like views on fundamentals, and thus furnished a basis for literary and social activity that was the more effective since the needs of the times favored it.

For France under Louis XV had gradually lost its prestige in Europe. The strength of the country had been sapped in bloody and rather useless wars and

Pyrrhean victories, which pleased no one. Profligacy at court had more than offset the frugality of the peasant. Pomp and ceremony could not compensate for the growing deficits of the exchequer. The popularity of Louis XIV gave way to a bare tolerance for his great-grandson, and this to a hearty contempt for the prince who came to the throne in 1774. From then on the government was at the mercy of financiers who were expected to remedy overnight the evils that had been engendered by a century of improvidence and autocracy.

Thus one might say that what the ministers of the king vainly endeavored to accomplish by near-at-hand measures, such as loans and a curtailment of feudal privileges, the Physiocrats meant to do with their study of production and circulation. To them the problem was definite, and a solution possible by mathematical demonstration. They relied upon their philosophy to show the natural order underlying what on the surface was so chaotic. They sought to vindicate the prior rights of landlord and farmer who, by virtue of their strategic position, could make or mar the country in conjunction with the Crown. In the long run, their Economic Table purported to show, public finance must vary with private cost-keeping and spending. From nature alone all surplus came, but treasuries would be empty as long as there was misappropriation at the source.

In what may be called the premises of Physiocratism there is no more merit than in most of the eighteenth century Naturalism. We find the Stoical viewpoint developed in theories of a state of nature, laws of nature, and natural rights. What Hooker and Grotius, Locke and Pufendorf, Vattel and Montesquieu had said in their treatises on sovereignty or on international law, the Physiocrats repeated with little or no variation. The

static rationalistic outlook which had so distinctly inspired English moralism, besides coloring psychological nomenclature, also predominated in France. Nay, French philosophy was so much beholden to the pathfinders across the Channel that, in perusing its pages, one feels brought back to the Restoration period of British speculation.

It seemed quite sufficient for the Physiocrats to say: "The natural order is merely the physical constitution which God Himself has given the universe." [1] Or: "Natural law is the right a man has to things for the enjoyment thereof." [2] And for this reason, "to secure the greatest amount of pleasure with the least possible outlay should be the aim of all economic effort." [3] Mainly in succeeding in this policy the natural order would be realized among men. Nature meant prevision and precision. God had willed it so. There was no need of devising means for saving an individual or a nation, provided only nature was correctly understood, and being understood, followed implicitly in the management of one's affairs.

The laws regulating the movements of the planets or the interactions of matter, were active in the organic world also, and especially in human society where complexity so obscured the fundamentals. Nature was all-wise and beneficent. Its reign extended over everything. What God had planned in the creation of the universe was not to be supposed to shut out mankind. Rather, if man made laws it was only by way of reflecting the higher and more general reason in things, the legislator, in this sense, modeling his positive order on the eternal natural which pervaded the cosmos. Considered from one point,

[1] See Dupont de Nemours' Physiocratie, 1767-68, Introduction to Quesnay's Works.
[2] Collection des Principaux Economistes, by Daire, Eugene, 1846, vol. 1; Quesnay, Le Droit Naturel, p. 46.
[3] Ibidem, Quesnay's Dialogues.

therefore, Naturalism meant the acknowledgment of continuity from physics to psychics. It was denied that two different sets of law ruled environment and society. It was taken as almost self-evident that the apparent gulf is simply an illusion due to man's unbalanced mind or faulty vision. If men would think and probe into the inner meaning of life they would soon admit their impotence in matters of morals or government. What could they think of that had not from the beginning been known and assigned its place? What were acts of parliament if not natural law applied, or in other words inferior copies of a wisdom older than man?

Hence, viewed from another angle, there need be no fear of misfortune so long as the natural economy was left undisturbed. For God was benevolent and fatherly in His solicitude. Things would right themselves even if for a while they went badly. Human nature was meant to gain by the physical arrangement, not to suffer unnoticed. The very inequality among men with respect to their innate aptitudes, capacities, tastes, and passions was a means for endless progress. Division of rights and duties rested on this important fact. The convenience, nay necessity of private property, was thus logically assured. Individuality of men could not be lost without defying the same principles that differentiated life below man. It was rational that a variety of interests should exist, and that Reason itself should guide men in their everyday economic cares. For how could they win out except by continual adaptation of their faculties to the precepts ordained by God? And how could there be adaptation without poise and diligence, i. e., reason? Happiness was morality suited to nature. It was procuring the utmost pleasure through right use of energy and intelligence. In such observance of natural dif-

ferences, wrought everywhere into an orderly system by Providence, lay the promise of justice to all. Interests, no matter how divergent, were reconciled by divine forethought, which man could scarcely overlook if anxious to prosper. Or in the words of Mercier de la Rivière: "The movements of society are spontaneous and not artificial, and the desire for joy which manifests itself in all its activities unwittingly drives it toward the realization of the ideal type of state." All was well if nature held sway. Optimism was the right note, not apprehension over ills that man had foolishly brought upon himself.

Two characteristics, consequently, play their part in Physiocratism, viz., first, a belief in distinctions between men, lest order in society become anarchy; and secondly, an easy faith in the goodness of men which reflected God's own goodwill and needed but a sufficient amount of freedom to bring bounteous returns. Order was the quintessence of reason. Man was a rational creature and could not forget his supreme responsibilities without sinking into barbarism. Inborn differences had always existed and probably would not disappear. There had to be governors and governed, landlords and farm-hands. Private property was by divine sanction no less than by the reason of things which the whole nature of man and the records of history attested to. Rights were real, but they differed and served several ends, not all of them obvious perhaps to the untutored.

Yet, as against this acceptance of the Ancient Régime, the Physiocrats cherished, in addition, ideals strikingly at variance with it. So much so indeed, that one is tempted to class them with the philosophers that forecast the Revolution. For in expatiating complacently on the natural order of things, one conformable to reason and the real designs of the Creator, the Physiocrats unavoidably

drew a contrast between France as it was and as it might be. Moreover, they were impelled to deprecate governmental interference, or for certain purposes to condemn it altogether. If men had the qualifications to measure nicely their own interests, if Providence stood sentinel so dangers might be eschewed, if physical laws extended to social happenings no less than to the motions of matter, then manifestly it was absurd to hem in men's enterprise at all points. To hinder might be bad, but to help even worse. Or, as the elder Mirabeau delivered himself: Legislation, if conformable to nature, was unnecessary, and if in violation of it, certain of defeat, for in the long run nature was the strongest. Mistakes could be made, but they must not become policies parading as virtue. To let alone was a good maxim for statesmen lest their zeal take them too far. Natural instincts could be trusted to do much good.

However, there were other grounds on which Physiocratism looked askance at paternal methods, and in advancing them philosophy was abandoned for economics in the narrower sense.

Forerunners had of course been developing the various views which proved exceedingly valuable without turning economics into a science. What the Mercantilists and Kameralists had stored up as the elements of an art of political economy, the French school utilized in part under the influence of English writers. But what entitles the Physiocrats, as remarked before, to the credit of having founded the science of economics is their unambiguous reference of economic particulars to a world order in which law is everything, in which matter and mind obey a principle of motion or circulation, in which by Design above man his activities come to express measur-

able relations, ratios as in production, or rates as in the course of progress.

From this standpoint it was natural for the Physiocrats to emphasize the collectivistic norm rather than the individualistic, even though they preached Laissez Faire and sincerely approved of the social stratification of their day. They ended with the individual because they believed in God, but they began with inert matter and the weal of nations because they saw Him through nature. The cult of nature was the reaction of modern times against medieval theocracy. The study of substance and space was an attempt at reconstructing an older personalism. A stress upon the material aspect of life was wholesome when poverty was dreaded and Enlightenment adored.

Economic Doctrines.—So the Physiocrats were consistent in defining wealth as concrete things derived, in one way or another, from the earth. They meant *stuff* when they said value. They pointed to articles more than to the services back of them. They saw the fecundity of the soil, or of the species inhabiting it, and found nothing in trade or industry to equal it. The wealth of nations was its soil and subsoil, its mines and forests, its fisheries and water-power. These assets might be used to provide a steady income. A surplus sprung from the clever exploitation of nature, not from the handicraft of the city-dweller. Extractive industries paid well; the rest was a change of forms of no decisive significance for the realm. Each season nature could leave a net product measurable on the scales, but by a like test the labors of merchant and manufacturer proved futile. It was a question, ultimately, of knowing to what uses rawstuffs should be put. If a certain ratio of these to finished articles, or of necessities to luxuries, or of agricultural

improvements to personal services, met with public approval, justified by the welfare of the nation and the needs of the Crown, then well and good. Otherwise there was no use boasting about industry and trade balances, especially if the sources gave out, or riches were employed recklessly for the amusement of some, and to the undoing of others. What would production boot if it neglected the prior rights of the farmer? Was anything "produced" if no quantitative increase could be ascertained? Was wealth more than stuff from the social viewpoint, or at least could any occupation compare with the agricultural, supposing the primary needs of a nation were at issue? In a crisis production had to aim at materials first of all. The conversion of produce or other yields of the earth into commodities was desirable, but merely auxiliary to the general end which was surely the prosperity of the whole kingdom.

In this temper the Physiocrats proposed definitions and classifications of toilers that could not last in a competitive age. Cost keeping took on a peculiar aspect, for it was almost socialistic, the books being kept, as it were, for the nation as a whole, with the result that distribution became an impersonal affair between three or four groups of the population, not at all traceable by the pricing process which obtained as widely almost in eighteenth century France as in Ricardian England.

Budgeting was involved in the attempt at describing the cycle of wealth which annually repeated itself in harmony with other rotations such as for instance that of the blood in the human body or the orbits of the planets. It was seen that agriculture necessitated several kinds of funds, one to buy stock and implements, a second to improve the grounds, a third to supply seed and like materials seasonally renewable, and perhaps a fourth to

take care of expansion of business. In estimating these amounts and tracing their returns to society the relative position of industrialists or servitors on the one side, and of tillers or proprietors on the other, challenged attention. The cycle of expense and product, of investment and surplus could be pictured as occurring in space, as covering the different parts of the country in which consumers lived. Or it could be understood as an act of apportionment among claimants to the stock. Or it could be followed as a continual transformation of materials through human intervention, many ends and classes of people thus being satisfied.

And this is exactly what was done. Cost was not a part of price, but an outlay by the only real producer —the farmer. Consumption was not of values, but of stuffs taken from the soil. Capital was not a right, but a store of materials fashioned variously so as to aid rural development. Other uses, while practical enough, must be made ancillary to this one of singular importance. Waste was folly when, and because usually, a charge against agricultural efficiency. Individual price and income could not matter a great deal since the problem was the strengthening of the people as a whole. The masses had a subsistence wage. Little more was assumed to be necessary. But how many farms there were, how managed, and what form finally the raw materials took, that deserved careful consideration. If we except Turgot or the glosses of the Physiocrats proper, we shall be impressed with the neglect of questions that later economics pronounced to be of central significance.

Significant to the Physiocrats were, however, certain applications, such as the reform of taxes, the restriction of feudal rights, and the inauguration of greater freedom in industry and trade.

The latter, as stated above, was advocated partly owing to a serene reliance upon Providence and the social disposition of man, and partly because of the distinction made between farming and other economic pursuits. For if trade and industry were sterile there was no point to protecting them artificially. On the contrary, it might be advisable to repress such activities so as to preserve a right balance between stuff and service production. And by the same token free-trade within national boundaries would be salutary since, for one thing, it would enhance the mobility of the agricultural surplus, and for another would relieve people of taxes which after all could be borne by only one economic class. The need of the times, as the Physiocrats saw it, was greater soil-production, less luxury and waste, and a more equitable, because more scientific, system of taxation. Taxes could be levied from none except those whom nature blessed with a natural surplus. What the soil produced over and above the requirements of the farmer, that was a genuine bonus for landlord, industrialist, trader, and professional. Let the taxes fall on this original surplus. Let there be stoppage at the source, if administratively feasible. If collected from the non-producers it will mean leakage and probably favoritism for undeserving classes. It was for the landlord to decide how much the land needed in replacement and investment sums, but after that any charge made upon him would have a beneficial restraining influence on the mode of living of others. The non-producers would feel the check the more, the severer the standards of the governments in its undertakings.

Physiocratism, in short, had solidaristic leanings by the force of its premises and reasonings, if not from an intent to rectify social errors. Driven to its logical conclusion it might go far toward a subversion of the old

political order, and this is the interpretation put upon it by some contemporaries, the Revolution being only a decade or two away. The Physiocrats not only espoused Enlightenment in certain applications of their own view, but they were in accord with liberalism as an antidote for mercantile fallacies. They stood in line with the rising forces that proclaimed Non-Interference as a first maxim of statesmanship.

III. Smithianism

Underlying Ideas.—Adam Smith was not a successor of Quesnay, but he learned something from him, and besides went farther in his analysis of the economic process. The broader interests of Physiocratism were not disavowed. But Smith after all represents a different viewpoint in important respects, as can easily be seen from his life history or his two principal works in which most of his professional opinions have been laid down with admirable lucidity.

In Physiocratism morality is a detail that in no wise affects its fundamental propositions. The mechanistic outlook determines the course of reasoning in spite of much verbiage about a beneficent Providence. Stoicism and not Christianism furnished the main weapons of defense. The world order was conceived more nearly as a play of forces due to matter in motion, than as an organic growth in which a Supreme Will presided. In France both materialism and mechanism gained a firmer foothold than on British soil. The French leaders of the eighteenth century were more consistent than their models in England. Metaphysics from the start had meant more to the former than to the latter, and in the analysis of economic processes the human aspect was unconsciously

slighted, from a desire to be precise. Exact economics was in vogue among the Physiocrats long before it was revived as an ideal by the Utilitarians and Marginists. Hence, in scanning the pages of that School, one is oppressed by a sense of dryness, of sheer scholastic erudition that contrasts poorly with the picturesque, invigorating exposition of the great Scotchman. Much food for thought, one is prone to lament, but only for those who are famishing for it!

Now, this was not the style of Adam Smith; nor was he given to a hobby of speaking in the abstract. To him the individual was a unit and center both, the sole object of fruitful study, and the bearer of all that might tend toward progress. Just as labor with him became more decisive than land, just as morality to him was a powerful agent for directing social enterprise, so he aimed constantly at illustrating his theorems from commonplaces in which the purely human figured at least as prominently as discussions of public policy. The pragmatic note was less often sounded than by his French colleagues, yet on the whole it made a more lasting impression. The author of a "Theory of the Moral Sentiments" was not likely to be misunderstood by an interested audience. Or, if he had dealt less summarily with the systems of earlier ages, there was the title itself of his economic treatise: "An Inquiry into the Nature and Causes of the Wealth of Nations,"—evidently a request that people think dispassionately of the welfare of all, without losing sight of the individual's share in the drama.

Smith had mused long over the ethical values of life before concentrating upon those matters which to-day pass as the whole of economics. It would be an exaggeration to say that his "Wealth of Nations" is a mere by-product of his larger interests, but there is no doubt

that it came as an afterthought, rather late in his career, a monument to research conducted when his fame as a philosopher was already assured. For, as we know from his duties at the University of Glasgow, where he began teaching in 1751, he lectured on the whole field of Moral Philosophy—Natural Theology, Ethics, Justice, and Police coming under that term. Such was the practice on the continent, such had been the precedent established by his own teacher, Francis Hutcheson, whose doctrines influenced him profoundly. As an adherent of Deism it could not have been difficult for him to combine theology with jurisprudence, but it is suggestive of the thoroughness of his thinking that he felt constrained to separate Politics from Ethics. For in the former, if we may believe his first biographer, Dugald Stewart, he meant to comprise only such "regulations which are founded, not upon the principle of justice, but that of expediency, and which are calculated to increase the riches, the power, and the prosperity of a State." [4]

That is to say, not only was a line of demarcation drawn between the realm of right and duty on the one side, and that of utility or positive law on the other, but furthermore he assigned to the principles of political economy a preëminent rôle in the development of mankind. Economics to him was a crucial point in the turning of history, not simply a phase dear to the heart of Farmers-General. Consequently, premises had to be found in facts of no immediate bearing upon his problem.

Smith's psychology, to be sure, does not occupy a dominant position in either his "Theory of the Moral Sentiments," which appeared in 1759, or in the "Wealth of Nations" of which the first edition came from the press seventeen years later. We must judge mainly from

[4] Stewart, D. Works, edit. of 1829, vol. 7, p. 10.

Smith's preliminary studies in England and abroad, from his close friendship with, e.g., Hume, the author of the "Treatise of Human Nature" (to say nothing of the several "Inquiries," his "Essays," and his "History of England"), and from his casual statements on the subject à propos of his ethics. But generally speaking his psychology was that of John Locke and Hume. We hear him hint at sensation as the source of ideas, at association of ideas, and the dual nature of man who struggles between a predisposition to suit only himself, and a recurrent regard for the weal of his fellowmen. As to the problem of knowledge he no doubt sided with the empiricists, and furthermore agreed to the tri-partite division of the mind into the faculties of will, affection, and cognition as it was current at that time. But he stood somewhat apart in making more of the emotions than even Hume, and in placing a sense of duty, acquired in the natural course of social progress, above the selfish weighing of pleasure and pain. For all his appreciation of economic values he refused to think of men as consumers only. There was a law of compensation that punished the evil-doers and rewarded the friends of righteousness. Equality in some respects was decreed by God!

Indeed, his Naturalism carried him far afield. In the "Wealth of Nations," for instance, he informs us that "by nature a philosopher is not in genius and disposition half so different from a street-porter, as a mastiff is from a greyhound. . . ." "The difference between the most dissimilar characters . . . seems to arise not so much from nature as from habit, custom, and education." [5] This of course squares with the views of Hume and

[5] Wealth of Nations, Book I, ch. 2. Edition used here is that of Everyman's Library, publ. by Dutton, E. P., and Company, New York.

with a growing sentiment among political philosophers, and goes to show why Smith expected much from personal initiative. His optimism was grounded in this amiable view of life which Naturalism, as already pointed out, had everywhere fostered. Thus he exclaims: "Without any intervention of the law, therefore, the private interests and passions of men naturally lead them to divide and distribute the stock of every society among all the different employments carried on in it, as nearly as possible in the proportion which is most agreeable to the interests of the whole society." The main passages in his "Wealth of Nations" reflecting this attitude are too well known to need repetition here. But it deserves mention that much the same idea was expressed in the "Theory of the Moral Sentiments," where nothing of a scheme of political economy is as yet intimated. He says for instance: "Take the whole earth at an average: For one man who suffers pain or misery, you will find twenty in prosperity and joy, or at least in tolerable circumstances." [6] And again: "They [the opulent] consume little more than the poor, and in spite of their natural selfishness and rapacity, though they mean only their own conveniency, though the sole end which they propose from the labors of all the thousands whom they employ, be the gratification of their own vain and insatiable desires, they divide with the poor the produce of all their improvements. They are led by an invisible hand to make nearly the same distribution of the necessaries of life, which would have been made, had the earth been divided into equal portions among all its inhabitants; and thus, without intending it, without knowing, advance the interest of the society, and afford means to the multiplication of the species. When Providence divided the earth among a few

[6] Part III, ch. 3.

lordly masters, it neither forgot nor abandoned those who seemed to have been left out in the partition. . . . In ease of body and peace of mind all the different ranks of life are nearly upon a level." [7] Did Roscher, the pioneer of the Historical movement a century later, think of this passage when he added: "As, in the structure of the world, the apparently opposing tendencies of the centrifugal and centripetal forces produce the harmony of the spheres, so, in the social life of man, self-interest and conscience produce in him the feeling for the common good"? [8] Probably not, but it is certain that many have echoed these sentiments of a noble investigator who, in spite of his knowledge of the world, could not believe in the failings of men. Laws of nature, rights of men, and the rationality of virtue appeared to direct people so that good prevailed over evil.

The theological background in fact gave the setting to most of Smith's psychological arguments. He thought of man as being made in the image of God more than as a machine that, in French materialistic fashion, operated like atoms in endless space. He vents his feelings about the matter in phrases like: "God, the avenger of injustice." [9] Reverence for natural behavior "is still further enhanced by an opinion, which is first impressed by nature, and afterwards confirmed by reasoning and philosophy, that the important rules of morality are the commands and laws of the Deity who will finally reward the obedient, and punish the transgressors of their duty. . . ." [10]

[7] Part IV, ch. 1.

[8] Principles of Political Economy, translated by Lalor, J. J., 1878, vol. 1, p. 75. See also Smith's Wealth of Nations, Book IV, ch. 2 and ch. 7.

[9] Theory of the Moral Sentiments, Part III, ch. 5. Edition used is the last published during Smith's lifetime, reprinted by Wells & Lilly, Boston, 1817.

[10] Ibidem. A strikingly similar view will be found in Vico's (J. B.) Principes de la Philosophie de l'Histoire, 1725, Book I, ch. 4. See Michelet's (J.) translation from the Italian, 1835.

God meant men to be happy; "no other end seems worthy of that supreme wisdom and divine benignity which we necessarily ascribe to Him." [11] We are benevolent ourselves because convinced that "all the inhabitants of the universe, the meanest as well as the greatest, are under the immediate care of that great benevolent and all-wise Being who directs all the movements of nature, and who is determined, by his own unalterable perfections, to maintain in it, at all times, the greatest possible quantity of happiness." [12] Hence the virtuous will be content that national interests "should be sacrificed to the greater interest of the universe—of which God Himself is the immediate administrator and director." [13] And here again we find assent among writers of a different temperament, as in W. Whewell, the author of the "History of Inductive Sciences," who in his "Elements of Morality" exclaims: "These ideas [of benevolence, justice, etc.] were given to man by God in order that he might, by them, direct his actions." [14] Or note from the Archbishop Whately this belief: "Man is, in the same act, doing one thing by choice for his own benefit, and another undesignedly under the guidance of Providence for the service of the community." [15] Reason thus was the mirror by which men should adjust their dress of manners.

All this then reminds us that Smith not only listened to the prophets of his day, but that, on a test, he could answer questions independently. For he frankly admitted his dissent where it counted, and rejected even more than he assimilated. He was an eclectic like other founders who add enough in treatment and viewpoint to dominate their age, and yet have their mind attuned to the voices

[11] Ibidem.
[12] Ibidem, Part VI, ch. 2.
[13] Ibidem.
[14] Whewell, W., vol. 1, Book III, ch. 1.
[15] Lectures on Political Economy, 1831, Lecture IV.

about them. In his "Theory of the Moral Sentiments" Smith speaks somewhat scornfully, if not despairingly, of Stoics, Hedonists, and Intuitionists. He does not fully agree with any of them, nor wishes to admit more than a cursory acquaintance with their works. That he had bestowed some thought upon their preachments we may safely assume; but it hardly seems as though he had done them full justice. Instead he starts with a different idea, and develops it into a full-blown theory of ethics.

The opening sentence of his "Theory of the Moral Sentiments" reads: "How selfish soever man may be supposed, there are evidently some principles in his nature which interest him in the fortune of others, and render their happiness necessary to him though he derives nothing from it except the pleasure of seeing it." Thus formulating the problem he proceeds to solve it, the general course of his argument being sufficiently familiar to all students of ethics. He leans toward intuitionism in that a potential power for moral judgment is taken for granted; but he becomes an empiricist mainly by stressing the force of experience in developing this potency. He writes: "Upon whatever we suppose that our moral faculties are founded, whether upon a certain modification of reason, upon an original instinct called a moral sense, or upon some other principle of our nature, it cannot be doubted that they were given us for the direction of our conduct in this life." [16] Such "rules of morality are the commands and laws of the Deity." [17]

But if experience did not teach us, the faculty for judging would nonetheless remain dormant. A being brought up in complete isolation, we are told, could have no sense of right and wrong. So that, if we wish to trace the moral sentiment to its roots we must after all con-

[16] Theory of the Moral Sentiments, Part III, ch. 5.
[17] Ibidem.

sider man as an integral part of his social environment. We may ask: "What is it which prompts the generous upon all occasions, and the mean upon many, to sacrifice their own interests to the greater interests of others?" answering: "It is reason, principle, conscience, the inhabitant of the breast, the man within, the great judge and arbiter of our conduct." [18] But in the last analysis we come to another factor. Namely: "It is by the *imagination* only that we can form any conception of what are his [the fellowman's] sensations. . . . It is the impressions of our *own* senses only, and not those of his, which our imaginations copy." [19] Sympathy thus is "fellow-feeling with any passion whatever"; and "if we consider all the different passions of Human Nature we shall find that they are regarded as decent or indecent just in proportion as mankind are more or less disposed to sympathize with them." [20] Thus experience underlies the growth of moral sentiments. Utility is one, albeit not the sole, source of ideas on good and evil. We thrive on approval, and perish in ostracism. The social is the only outlet for our endeavors, however self-regarding the immediate end. Men cannot sin forever. As Cumberland had remarked much earlier, the battle between two opposing penchants is won for Good. Thanks to our habit of seeing the world through our own senses, working with simple ideas, and reconstructing them into concepts of vast complexity, we cower before the censure of conscience, doing right in spite of sore temptations. Introspective psychology thus helped Smith to find a logical basis for individualism, for Laissez Faire.

This in a degree applies also, and finally, to Smith's views on method, so far as he had any at all.

[18] Ibidem, Part III, ch. 3.
[19] Ibidem, Part III, ch. 1.
[20] Ibidem, Part I, ch. 2. See also ch. 1, first sentence.

Logic had not traveled far when the "Wealth of Nations" was penned. The foundations for Mill's "Logic" had in a sense already been laid, but there was nothing very definite for Smith to work with, and out of his own mind he probably was not able to frame a clear-cut opinion. Logic was not his forte. However, something can be said.

Francis Bacon had sounded a clarion call in his "Instauratio" and "Novum Organum" in which the inadequacy of medieval logic furnished a leading theme. Induction, and complete induction at that, was held to be the only safe method for arriving at truth. The experimental method, comprising notably observation and measurement, stood out as the great contribution of the Renaissance to modern science. Though nothing was said about its application to social studies it could not be long before somebody would make the attempt.

And this honor fell first to Thomas Hobbes, the spokesman of everything precise and systematic in the realm of human investigations. Moral philosophy, he boldly asserted, must be considered after physics because it deals with the motions of the mind which "have their causes in sense and imagination." [21] In his chapter "On Method" he differentiates clearly betwen de- and in-duction, urging the former for social science because it rested entirely on facts of human nature. Given these elements, it would not be difficult to explain such norms as the ethical and the intellectual. Nothing was made clear as to the scope of social science or the laws it might possibly establish, but in resting his case on psychology as the key to social problems Hobbes handed down a decision of no mean import.

In Locke the theory of knowledge absorbs so entirely our attention that the methodological question is hardly

[21] Elements of Philosophy, Part I, ch. 6.

given a thought. There is virtually nothing of importance except it had been suggested by Hobbes himself; as for instance the treatment of cause and effect, (where the idea of a correlation of variables is already vaguely broached) the principle of association, or the forceful discussion of probability and error. When at the end of his "Essay" Locke offers a three-fold classification of sciences the dearth of data for a logic of social science becomes unmistakable. We find one place assigned to "natural philosophy" whose end is "bare speculative truth; and whatsoever can afford the mind of man any such, falls under this branch, whether it be God himself, angels, spirits, bodies, or any of their affections, as number and figure, etc." A second class deals with "the skill of right applying our own powers and actions for the attainment of things good and useful," and "the most considerable under this head is ethics";[22] while a third is logic. Like Hume, the author of the "Essay" also believed in the certainty of moral knowledge since it is derived immediately from reflection, but of course this flirting with intuitionism was not conducive to a development of inductive logic.

In Hume as well as in Smith induction is practiced more than preached. Thus, if the former declared: "We must . . . glean up our experiments in this science [of human nature] from a cautious observation of human life, and take them as they appear in the common course of the world, by men's behavior in company, in affairs, and in their pleasures," [23] he shows the application not merely in his "Treatise," but with signal success, for the time at which he wrote, in his "History of England." As a psychologist he might say. ". . . In the production and

[22] Essay Concerning the Human Understanding.
[23] Treatise, Introduction.

conduct of the passions there is a certain regular mechanism, which is susceptible of as accurate a disquisition as the laws of motion, optics, hydrostatics, or any part of natural philosophy," [24] but as a moralist he was contented with much less, with variations incalculable, and with an implicit recognition of the limits of social science. Indeed, he never departed from his earliest conclusion that "all kinds of reasoning consists in nothing but a comparison, and a discovery of those relations, either constant or inconstant, which two or more objects bear to each other." [25] The inconstancy of things impressed him most. He was therefore not pretentious in his sociological faith. He doubtless warned Smith, his admiring friend, not to expect too much from social analysis.

Anyhow, Smith seems to have been at one with his countryman on the nature of human knowledge. He too was a phenomenalist who deemed knowledge hypothetical except where verification by the senses followed. Unlike Thomas Reid, his successor at Glasgow, Smith clung to subjecticism. Imagination, he says, in his paper on "Principles Which Lead and Direct Philosophical Inquiries, Illustrated by the History of Astronomy," is the basis of all knowledge. Without it science can do nothing; and this is true not simply from the standpoint of the artist who contrasts vision with a plain sense of sight, but likewise from that of the philosopher who would understand the secret of all method. Beyond this admission, Smith used a common sense principle of work. He took the facts as they appeared to him. He has his eyes everywhere and is a keen, yet a sympathetic student of human nature. He interests himself in many questions and disdains not to learn from the humblest peasant. He relies

[24] Ibidem, in Essay on Passion, at the end.
[25] Ibidem, Book I, Part III, § 2.

as much upon personal experience as upon books or abstractions professionally distilled. He amazes us in his "Theory of the Moral Sentiments" with a wealth of illustrations taken from daily life and put to excellent use. His charming character as Christian and scientist shines on many a page. To vitalize the inert, to return into the concrete the abstractest principle, this is his sincere endeavor in which none succeeded more nobly. Later critics have disagreed on the question of his method, some thinking it purely inductive, and others altogether deductive, as for instance D. Stewart, John Rae [26] and the late Wilhelm Wundt.[27] However, there is little profit in bandying words about it. The issue is not whether Smith adopted one or the other device, but whether the two are logically or psychologically distinct, or whether Smith committed himself definitely to any one plan of procedure, or whether, waiving this detail, he could lay the foundations for a science of economics by *any* means. And here our answer cannot be uncertain, unless we rate substance higher than form.

Formality does not seem to have counted much with the author of the "Wealth of Nations." He nowhere displays any strong sense of logical sequence. In his ethical treatise he comes perhaps near to it; but in that field for which posterity knows him best he composed with much freedom. Students have pointed out that probably the work grew under his hands in the writing of it, and without his being fully alive to the consequences involved. The main divisions suggest a lack of pretense to systematization; overlappings, repetitions, excursions, and contradictions abound. One need only to compare the style

[26] Sociological Theory of Capital, edited by Mixter, Ch. W., 1905, Appendix, Article 5. The original title of the work, which appeared in 1834, was: Statement of Some New Principles on the Subject of Political Economy.

[27] Wundt, W. Logik, 2 edit., vol. 2, Part II, p. 503.

of the "Theory of the Moral Sentiments" with that of the "Wealth of Nations," to see the difference between a work long looked forward to, carefully developed along one line, even lingered over with pride, and one in which practical purposes rule above dignity or completeness of treatment.

There is no better attempt at a delimitation of the subject in the "Wealth of Nations" than in James Steuart's "Principles of Political Economy," a work of great merit published in 1767, and the unity of which is, in one respect, more real than in its successor. For out of five parts in the "Wealth of Nations" only two deal with economics as a science, and all in all this portion constitutes only about one third of the whole survey. Smith, to be sure, treats Public Finance much more thoroughly than Steuart and excels in the analysis of price and shares, in historical mindedness, and in liveliness of diction. But it will not do to dismiss therefore Steuart's work as inconsequential, as a mere relic of a mercantilistic age, which had no idea of science. Rather, there was logic in Steuart's leaving out history altogether, in assembling, as Justi had done for the Kameralists, the knowledge of the day on all economic subjects, the Physiocratic view alone excepted.

Steuart's Political Economy.—Steuart begins with population and agriculture, and ends with credit and taxation. He devotes a disproportionate amount of space to trade and industry, but of course is moved by the interests natural to his group. Unlike Smith he thought of economics as an art rather than a science. He tells us at the outset: "The principal object of this science is to secure a certain fund of subsistence for all the inhabitants, . . . and to employ them . . . in such a manner as naturally to create reciprocal relations . . . between

them, so as to make their several interests lead them to supply one another with their reciprocal wants. . . . Political economy in each country must necessarily be different." In other words, applications must be stressed, and in the second place organization itself will vary as human will determines it. This is not, then, making a set of laws and exact definitions out of social inquiry, but for all that certain general principles underlie our activities. The premises are given by the known facts of human nature. Self-interest and expediency prevail in the long run, though duty and sex passion frequently defy the dictates of reason. Ethical norms, in any case, must not influence the would-be economist. It is not for him to contrast the Is with the Ought, but to separate them so as to ascertain facts regardless of their moral values.

Smith's Idea of Prosperity.—In this Steuart anticipated Smith, or rather was more consistent than the latter. For Smith disliked utilitarianism as then understood, and mused on the riddles of progress more than on the foibles of a straying individual. To him personal liberties seemed useless without the economic, and both became duties when viewed from the standpoint of our relation to Providence. Hence his silence on legal rights as a basis for economic analysis: hence the assumption of private property as something either due to labor, or brought into existence, perhaps by force, yet also with the sanction of an omniscient Deity. Smith could not get himself to believe anything else than that God kept vigil over human affairs.

Dugald Stewart in his biographical sketch brings out this point. But it is made sufficiently clear in the "Theory of the Moral Sentiments" and in the economic treatise where Laissez Faire is presented as the only natural ideal of government. It is avowed to be best

because of the fundamentals of human nature, because of the Design directing human history, because of differences in aptitude and the advantages of a division of labor. We are assured, as already seen, that self and society work naturally toward the same end. Sympathy and conscience curb one, while egotism or vainglory impel the other. No matter what the motive, the average result is the same: Mankind prospers in proportion as the individual is allowed to go his own way. At one point we are shown why protection to agriculture undermines industry, thus depriving the farmer of his home market; at another, that the "encouragement of industry is bad" because "no equal quantity of productive labor employed in manufactures can ever occasion so great a reproduction" [28] as agriculture. Close as well as distant views are taken of the situation, but throughout the argument is for freedom. "The great object of the political economy of every country is to increase the riches and power of that country," [29] and that can only be done by respecting the natural harmonies. This was very much in the style of Adam Ferguson, who in his "Essay on the History of Civil Society" (1767) had written: "Men are tempted to labor and to practice lucrative arts by motives of interest. Secure to the workman the fruits of his labor, give him the prospects of independence, or freedom, and the public has found a faithful minister in the acquisition of wealth. . . . The statesman in this, as in the case of population itself, can do little more than avoid doing mischief." [30] What more did Smith fight for? How else could he give point to his economic dissertation? It was the collectivistic aim, like Ferguson's or the Physiocratic, justified by an appeal to the best in human nature. Col-

[28] Wealth of Nations, Book II, ch. 5. See also Book IV, ch. 9.
[29] Book II, ch. 5. See also Stewart, D., Lectures on Political Economy, in his Collected Works, edit. of 1829, vol. 9, p. 3.
[30] Edition of 1819, p. 259.

lectivism was part of the Naturalistic outlook, though it was forgotten or despised by the Utilitarians.

A modern economist is not far wrong in writing: "Smith may be said to have fused all individual interests into one great national interest. He has nothing to say about enterpreneurs and laborers. . . ." [31] That is exactly so. Smith saw the problem from a social standpoint. He emphasizes the material origins of all kinds of wealth. He has in mind stuff and energy in discussing value or labor. He is more interested in the national budget than in competitive accounting, and hence falls into many confusions when analyzing cost and price, capital and shares of the producing factors. What could be expected from a student who wanted a long-time vista rather than a cross-section of the present? Economics had not yet been elevated to the rank of an "exact" science!

Economic Doctrines.—But important concepts were made clear, serving to give prestige to the "Inquiry" almost as much as did his critique of mercantilism. There is, for instance, the imputation of wealth to labor instead of to nature, as the Physiocrats desired. In line with the ideas of Locke, Tucker, Hume, and Turgot the active agent in production is set apart from all natural resources. The congenital abilities of men are pointed out; education is given credit for multiplying productive powers and directing thought and energy into useful channels. Invention is not overlooked in the process, for the eighteenth century particularly had profited by it, in agriculture to begin with, and by 1776 industry also to some extent. Epoch-making mechanical inventions were soon to be made. It was as if the "Inquiry" had reckoned

[31] Pierson, N. G., Principles of Economics, transl. by Wotzel, A. A., vol. 1, p. 10.

with this industrial revolution and tried to generalize upon the experiences which it offered to economics.

By prudent use of the stock in hand, labor was shown to benefit constantly, no matter how slow the adjustment. From labor came capital and savings, but to labor also went wages above subsistence. Not waste by parasites, as Mandeville had sponsored it, but thrift among workers would enrich the nation, giving variety to our mode of living and providing for the Exchequer that revenue without which all nations were powerless when at war. The soil, to be sure, might give out now and then, or yield fruits only after much coaxing in response to long hours of toil; but man was his own captain and savior; he could add labor-saving devices to offset the penury of nature, or proportion his outlay on agriculture, industry, and trade so as to outstrip other countries in the race. It was a question of arranging the different productivities of different fields of work in a certain order, of giving men free rein in their quest for employment, of letting supplies flow freely where demand seemed to be most pressing. Nothing was gained by regulating men where nature had already provided the best spur to maximum productiveness. Free-trade therefore was good, and paternalism bad. In banking perhaps a minimum amount of supervision would help, but in general the individual was to judge for himself.

This seemed reasonable in an age where the masses were just completing their emancipation from the fetters of feudalism. What manumission had meant to the fourteenth century, and the "liberties of the subject" to Puritans, that the next age expected from a universal ballot, from reforms in representation, freedom of contract and of vocation. It was necessary, as Smith saw it, that production and exchange be as unhampered as an expression

of political opinion was at electioneering. The chain of progress, he would have said, runs from division of labor to rising efficiency; from there to surplus and savings, and then further to the development of capital and a rising percentage of producers in the population. National power could not unfold itself any other way, nor could mere affluence of certain people measure progress. For at last analysis nothing was so fine a test for national vigor as a high density per square mile. "The most decisive mark of the prosperity of any country is the increase of the number of its inhabitants" [32]—increase, be it noted, not density alone, for when the latter was at its maximum a nation might reach a stationary condition. Smith therefore was in accord with earlier writers like Colbert in France, Seckendorff, Conring, and Justi among the Germans, and Harrington, Temple, Child, Locke, and Petty in his own country. He frequently evinced his indebtedness to others, though giving a moral tinge to his decisions such as others cared little about.

In fact, this moral undercurrent in a sense was the undoing of Smith, for it packs his treatise with inconsistencies that have never ceased to interest critics. Both as pioneer who opened a new field and hence left many vague concepts, and as theist who seeks new norms Smith was likely to puzzle posterity.

How many definitions, for instance, of capital and cost! How variable the stress of different aspects of one and the same thing at different times! How noticeable the mixture of competitive and non-competitive norms! How tantalizing the law of price, whether of wage or of goods! At one time supply and demand as guide to all values; at another cost in effort, or again pecuniary outlay. "Natural value" alongside of alternative costs in

[32] Wealth of Nations, Book I, ch. 8.

labor; utility ranking with scarcity as a key to value; wage as a rate or as a share assigned to labor in general during a year. It is impossible to tell how much market prices are allowed to deviate from the "natural," or whether prices cover incomes, or not.

In trying to cover all the facts, especially the variety of exceptions for every rule, Smith was enticed into admissions that made a strict logic of methods impossible. There was no doubt that a new vision had been given to the world in his "Wealth of Nations," but it might have been predicted also that a science of what *is* could not succeed, until the last remnants of a doctrine of Ought, which still clung to Smith, had been disowned as something incongruous and detrimental. And this was a step taken by his successors who understood him only to a certain extent.

CHAPTER FOUR

UTILITARIANISM

I. Premises

Environmental Changes from 1776-1900.—Since 1776, when Smith's "Inquiry into the Nature and Causes of the Wealth of Nations" was given to an expectant world, our social environment has changed so as to make a comparison of the two eras difficult. When Smith wrote his main work agriculture was still the dominant industry of England. The soil still fed the entire population and even left a slight surplus for export. The population was less than a quarter of what it is to-day. The vestiges of the manor system had not yet disappeared from the landscape, nor from the statute books. The people were, with the exception of a few localities, scattered thinly over the land. Privilege was for the nobility, and the House of Lords kept on disputing supremacy with the Lower House. To gauge the prosperity of the country one traveled over the highways and byways in a coach, estimating crops, reporting on the improvements made on glebe or the commons. The journals of the day and the better known surveys of A. Young remind one of this rural, Merrie Old England. It was not unnatural for Smith to have thought only of wage-earner, landlord, and enterpriser as long as economic organization was simple and the status of each class definitely determined.

On the continent too wealth consisted chiefly of land.

That is, there too agriculture was, barring certain restricted regions of manufacture, the mainstay of the people. Manu-facture was not yet a misnomer for the production of most commodities, for mechanical power was unknown; the hand did nearly all the fashioning, the implements were few whether one worked as a farmer or as an artisan or miner. Indeed, the conditions for a marked change were more nearly ripe in the British Isles than elsewhere, as the trend of history soon made clear. It was not difficult to arrive at a conclusion as to the circulation of goods or the price-making factors while the village was still largely self-sufficient, the organization of business simple, and the right of each claimant to the social dividend traditionally defined. If government interference had lost vogue it was largely because markets were still of a restricted area, because local self-sufficiency was a real economic factor, and because the interdependence of nations was grouped about non-essentials mainly. Necessities had not yet become a notable part of overseas commerce.

But all this was changed during the next hundred years. By the time J. S. Mill composed his "Principles of Political Economy" the world had undergone decided changes; new characteristics had displaced those Adam Smith knew so well.

Just a few years before the publication of the "Wealth of Nations" Australia was discovered. Since then no great mass of land has been added to our map—unless we include the antarctic regions—but exploration opened up the interior of the continents whose coastal lines earlier adventurers had sketched in the rough. Enormous riches came to view in the course of this surveying and applying of modern science. All our expectations were exceeded by the developments in the Americas and in Africa. The

yields of gold and silver that most impressed the sixteenth century ceased to figure prominently in modern accounts, in spite of their unprecedented volume and weight. Other natural resources came to mean so much more to us: Timber and iron and coal, the catch of the fishing fleets, the fertility of virgin soils extending over vast drainage basins, the commercial value of waterways, hydraulic power, and the appearance of rare minerals indispensable to modern industry and warfare. As a general result of such accessions new in kind and quantity nations swung themselves up to higher material levels of living. What was once the privilege of the few by degrees became the property of the many. Luxuries became necessities, and the annual wage that formerly would have sustained a large family now sufficed scarcely for a single laborer, however crude the services he might render.

Correspondingly, too, density of population was measured by different standards, for two square-miles now harbor as many people as five once. In England where economics first became a subject for popular study the number of inhabitants, not counting Ireland, increased from nine to thirty-five millions. In France the increase amounted at least to fifty per cent, in Germany to about one hundred and fifty per cent, and for all Europe to nearly one hundred per cent. The United States of America had a little more than three million inhabitants when the first census was taken (1790), ten times that number at the outbreak of the Civil War, and over a hundred million in 1920. Big cities have sprung up in the Old and in the New World, some of them growing from country towns to the dimensions of a metropolis. Enormous congestion at these centers, and a general gain of the urban element have contributed to the feeling that economic and legal relations must be nicely defined and

constantly supervised if peace understanding of nine- among nations is to be preserved. The variety of thought is as

However, science and industry did much to balance the pressure of population. Discoveries and inventions have enabled us to do what was impossible for the contemporaries of Adam Smith, or on the other hand to do it in only a fraction of the time, improving on quality and serviceability besides. What seemed like a unique Industrial Revolution at the end of the eighteenth century in England has since been followed by changes just as momentous and spread over a far larger area in Europe and in the western hemisphere. The substitution of mechanical for human or animal power was the first step toward an incalculable development of natural resources. Machino-facture displaced manu-facture; the domestic system was replaced by the factory system; personal ties between employer and employee gave way to purely legal ties; division of labor to specialization and integration of processes multiplying wonderfully the productivity of men, though also cramping their faculties of mind. Large-scale production seemed to demand this sacrifice. Capital intervened between producers so as to divide them into groups with distinct, often irreconcilable, interests. Saving was still important, but ingenuity and captaincy vastly more so. Investments counted, and land no longer measured wealth. To own a surplus was everything, but how it was acquired was less than ever a question of personal diligence or mastery of a craft. The metamorphosis that was so evident to the eye called also for a metamorphosis of minds, or at least for a shifting of emphasis from the mastery of subjects to a mastery of men! He who knew how to organize material and men in their *legal* relations under freedom of contract did

yields of gold and silver grasped merely their *technical* century ceased to f
in spite of their t process of production was shown to natural resst results. Though the initial expense might Timber ous, it paid in the end, for the flow of goods was the f gular, the yield so colossal that nations grew richer han ever. Indirect methods of production, ramified technical coöperation, the objectification of personal assets and endeavors through capitalism, and the economic interdependence of peoples the world over—such became outstanding features of modern life. The socio-economic mechanism had become incredibly complex.

Nothing but a marvelous development of the means of communication and of transportation could meet the requirements of this most recent situation. Nothing short of decided changes in popular ideals and professional knowledge could be expected in return.

Communication by degrees served relatively less for the exchange of news and views, and more as an indispensable link in the chain of want, effort, and gratification. Market conditions had to be quickly appraised and put at the disposal of parties separated by many hundreds and even thousands of miles. Equalization of demands in point of time and place resulted from this interchange of intelligence and served to economize labor, besides leveling prices and profits. For rapid transit the telegraph proved as valuable as steam-power itself; and from the standpoint of government nothing was more needed than an apparatus by which outlying districts of administration could be swiftly reached, for instruction or inquiry, as the case might be. National consciousness depended on uniformity of beliefs and customs, and rapidity of communication took first place as an agency for bringing this about.

Hence the progress in communication must be con-

sidered one of the essentials to an understanding of nineteenth century economic developments. The variety of devices invented to convey and preserve thought is as remarkable as the diversification of our material products for daily consumption. Sound and sign—or in Greek words, phone and graph—gained prestige in the economic sense no less than in the wider intellectual. Everywhere symbols, audible and visible: Telephone and telegraph, radiograph and automatic telephoning, phonograph and dictograph, rotary press and multigraph, photography and kinematograph, linotype and typewriter machines—all these and more rendered service, shortening distances, carrying thought with lightning speed, multiplying our records and preserving them as tone or letter.

Transportation not unnaturally kept strides with this revolution in communication. The railroad and the steamship at the very beginning of the nineteenth century were discussed as feasible instruments of traffic. Steam displaced muscular energy, and rails the once indispensable pike. Yet steam-roads have found a rival in electric traction, while automobile and aeroplane have in part at least made us independent of iron tracks. Sailing ship and stage-coach still have their uses, but the business world has long since found them inadequate. What is wanted is high speed, regularity and frequency of movements, safety and utmost comfort, cheapness and independence of weather conditions. Thus only can the productive machinery be kept going; thus only can the whole earth serve as a single market in which nations bid against one another, as once upon a time individuals at a fair. Perishables can thus be transported over vast distances and seasonal products be supplied the whole year round. Large markets and localization of industry go hand in hand. To produce

cheaply the scale of operations must be large, but to maintain huge plants year in year out sales must extend over large areas, catering to thousands, if not to millions, seeking an outlet in foreign lands, and tending to equalize supplies very much as telegraph and long-distance phone help to equalize demands.

Naturally such transformations gave a new aspect to our general mode of living, and to our economic organization. The simplicity pictured by the founders of economics no longer obtains in these days, nor is it likely to return. The technological changes mentioned involved a realignment of producing factors and of distributive agents. They added many members to the group which during the eighteenth century was held to supervise the entire process of production and exchange. New principles and irregularities have necessarily appeared in the economic life of nations. Economic theory was not only bound to take cognizance of these modifications, but it was pressed more and more to ask whether its allowances were quite sufficient. The last few generations, in other words, not merely witnessed a decided change in the viewpoints of economic students, but they furthermore amassed knowledge that the science of economics in particular did not fully utilize. The breach between the one and the other widened in spite of the adaptations noticeable in economic literature, and if no other reason could be assigned it would be doubtless the old one that movements of thought usually overlap, proceeding at divergent angles no matter how much their leaders try to keep in touch with one another.

Ideas on many subjects changed of course pari passu with the change of external conditions, that is of means of production and modes of consumption.

For example, the average man's knowledge was enlarged, and a leverage provided whereby personal claims to wealth and rights could be made a potent political force. Illiteracy has become much rarer, and a tolerant if not enthusiastic regard for learning more common. The higher institutions of learning instruct hundreds of thousands when formerly they were open to only a few select of the upper social strata. The cost of education, like things to eat and wear, was lessened particularly during the second half of the last century, and perhaps most of all in the United States where nature gave with such a lavish hand. The democratic ideal has been put to a test nowhere more than in the educational field. The older notion that human capacities are comparatively fixed and unequally distributed has given way to the assumption that the majority can be taught to think, and to master a given subject. Thus the results of scientific research were increasingly put before a curious public. Public school attendance was enforced and prolonged. Lower strata rose to affluence and power through opportunities bestowed freely, with the help of carefully trained teachers, and at the behest of governments who deemed no investment as profitable as money spent for class-rooms and laboratories.

The general result was a dissemination of knowledge among the masses who formerly eked out a bare existence in ignorance and despair. But the process has not yet gone so far as to develop the average man's powers of reasoning as well as his ability to assimilate facts. A little knowledge for everybody turned out to be, as so often has been lamented, a dangerous thing, since doubt was cultivated more than faith. And doubt could easily be resolved into suspicion and restlessness. An interminable procession of readings and lecturing through the daily

press and the omnipotent popular magazine, through partisan organs and soap-box orators promoted criticism more than coöperation. In its desirable form this agitation for more power came to mean a universal manhood (and in some countries womanhood) suffrage, the representative principle of government gaining ground everywhere. At the other end however it brought acts of violence, consolidations for group-aggrandizement, an intensification of class-consciousness, and hence indirectly a greater need for centralized control, whether to curb capital or to safeguard the interests of a responsible minority. The functions of government therefore astonishingly expanded since the birth of Laissez Faire. A natural trend toward complexity in economic affairs was accentuated by the desire of legislatures to adjudicate cases that, according to classic economics, belonged altogether to the individual. Natural science and applied science were accorded a place in public control irrespective of what social science had advocated. Only of recent years could economists see their way clear to an acceptance of policies which, though furnishing materials for social science, had certainly not met with the approval of its first designers.

Nineteenth Century Science and Philosophy.—It goes almost without saying that changes in political opinion were accompanied by changes on other points of doctrine whose bearing upon the development of economics is real, however difficult it might be to trace them in detail. The rapid growth of scientific information, e. g., influenced economics both by way of applied science and through the mediation of philosophy in the narrower sense. Of the fundamental sciences only physics and chemistry had progressed far by the end of the eighteenth century, unless mathematics be here also

considered as a science. Biology and psychology had lagged behind from the outset; but since Adam Smith they have changed radically in contents, aims, and methods. Economics itself led the way among social inquiries, while the continued study of nature added innumerable special sciences to our catalogue, most of them eventually modifying the views of an earlier age. With new and incomparably improved instruments for measuring magnitudes, most relations between things had to be interpreted. Precision and reliability gained immensely, but on the other hand men felt less cocksure of a number of propositions, and slowly the old questions arose again, or were treated with a respect that eighteenth century prophets would have wondered at. Definitions were restated and revised again. Boundary lines between apparently strictly distinct fields of inquiry were shifted or became blurred. One science took over the work of another, and overlappings became permissible because none would undertake to act as arbiter. Thus new conclusions and hypotheses, new units of measurement and ever larger questions continued bobbing up. In so far as possible, theorems were applied and served to alter the economic environment. Engineering, agronomy, medicine, manufactures of various sorts, and our network of communications are the most obvious instances in point. But as against these triumphs there still remained problems and speculations along traditional lines, whose effect the economist could not altogether escape.

Indeed, it should not be forgotten that economics sprang directly from philosophy, and only mediately from natural science. For as has been shown, it was from a wish to establish a logical connection between questions of ultimate value and the social processes that men studied these latter. When economics was young and a

demarcation of its bounds correspondingly hazardous, the union of philosophy and social science was natural. One took for granted that the best preparation for the latter was a good acquaintance with the former. The Kameralists and the Physiocrats were philosophers more than exact scientists. Adam Smith established a good precedent in his university lectures on moral philosophy. As J. S. Mill put it in his essay on Comte: "A person is not likely to be a good economist, who is nothing else." It was true certainly in the earlier period of economic thought, and even later we find substantiation in the works of such leading lights as J. S. Mill himself, of his father James Mill, of J. Bentham, Archbishop Whately, W. S. Jevons, H. Sidgwick, and—in America among others—H. C. Carey and F. Bowen.

In view of this union of philosophy and economics in each of the men mentioned, and of course also in certain others, one naturally expects philosophic history to have affected the growth of economics. Its literature, to be sure, leaves one very much in doubt. Cross-references are few and far between, and of specific cases in which economic argument was due altogether to philosophic theories there appear to be none. What we *can* say is that probably many economists remembered their university training in certain philosophic subjects, kept abreast of their times and permitted such contemporary speculations to color their arguments or to suggest an approach. And then, of course, there is that residuum of dependence which a perusal of many economic treatises reveals, and whose import is so candidly professed by some pioneers of Utilitarian and Marginal economics.

To illustrate the connection from only two problems in philosophy, namely, those of truth and virtue: Economics was strengthened by the empirical outlook as regards the

first, but drawn toward what may here be called the transcendental view in its treatment of ethics. That is to say, economics was itself assuredly a by-product of empiricism and of the emergence of natural science out of the Renaissance. The demand for an examination of evidences, for experimentation and exact tests, for a belief in the reality of the world about us and in man's ability to know things definitely—this demand called into being social no less than natural science, and true to this precedent economics was separated from theology and moral philosophy. Besides, need one repeat that Comte's sociology and J. S. Mill's "Logic" give the finest proof of the philosophical foundations underlying much economic theorizing?

However, it is true that while all knowledge was held to be experiential, the metaphysical question of reality and of mind being variously answered, on other matters economists agreed with the Absolutistic philosophy, with German Transcendentalism and Idealism generally. Few economists, if one may judge from leading works, concerned themselves in any way with the question of reality and truth, with the relation of things to values, and of Self to the Universe; but they did separate truth and virtue in Kantian style. They set religion aside as something alien to social inquiries; and they discussed methodology as if induction and deduction were opposites or at any rate categorically distinct, nay, usable at will according to aims pursued.

Furthermore,—and this last but not least—the Transcendental school of philosophy since Kant is mainly at the root not only of all modern historism, but, in particular, of economic historism. In the eighteenth century lie the germs of nineteenth century relativism. In Hegel's dialectic Marx and the Historical School of economists

found inspiration for labors whose one goal was the dynamic interpretation of life. The idealistic undercurrent in Hegel was disparaged. The pragmatic outgrowths of a later epoch were adjudged seemingly as of no consequence for a theory either of pricing or of prosperity. But the unifying force of the historical concept made itself felt in virtually all economic literature since 1800. Ricardo is an exception that might be used to prove the rule.

The Hegelian logic left its impress, vaguely but indelibly, upon economics because it found support in scientific discoveries and was a natural starting-point for a criticism of any static social theory.

The nineteenth century was the age of Evolution, and it was the evolutionary view which could most readily be deduced from Hegel's metaphysics. All things to be judged as to time and place! A mighty principle everywhere at work! An age in which nothing was made clearer than the instability of things and thoughts! An age which could boast of a Darwin, Spencer, and Wallace, of a Huxley, Haeckel, and Weismann, of a Lyell and a Baer, of paleontologists and philologists, of philosophers of history and of genetic psychologists, of a Bergson and Nietzsche, of "periodic laws" in chemistry and of planetesimal theories in astronomy. Everything real and valuable only for a while! All things becoming and ending! Nothing true except for person, place, and period! Pragmatism as a theory of knowledge, or as a key to Logic. Mind as behavior, and belief as proof. All achievements for the moment, and nothing above a testing. The Bible thus but a book, and only *a* book. Religion all too human, and foredoomed to change with time. In short, nothing left but a reference of values to individual wants!

It cannot surprise us if in at least some of its phases

this philosophy appealed to economists, prompting them to a revision of premises and principles, even though in the main Absolutists led the way. In fact, empiricism and transcendentalism, pragmatism and historism in the larger sense—all four manners of philosophizing found a place in economic literature. But broadly speaking, their consideration was so slight, and the doctrine so flexible, that economics had nothing to expect, or nothing to fear, from any of them. Specialization itself made difficult a sympathetic insight into metaphysical problems, and the practical needs of the time further directed the course of economic investigations. The progress of economics, for this reason, must be sought in steps taken independent of philosophic movements. Developments after Smith are measurable entirely by what economists *as such* wrote after him.

Economics from 1776 to 1817.—When Adam Smith died in 1790 his work had already made him famous. He had the satisfaction of seeing his treatise praised by a large number of experts both in his native land and elsewhere. Five editions of the "Wealth of Nations" were published during his lifetime. Men prominent in public affairs paid tribute to his genius and labored to make him known in high official circles. Pitt the Younger was among his admirers. Parliament complimented him and hastened to test out some of the principles enunciated. The stir that Smith's message created was the greater since no words for economics anywhere near so convincing and thorough were spoken for several decades to come. Smith seemed to have exhausted the subject in a single discussion. Monographs on a variety of topics, but adding little to social science as a whole, constitute the only contributions during the Napoleonic period. Men wrote on rent, on the essence of wealth, and on population.

Malthus in 1798 aroused new interest by his "Essay on Population." The Earl of Lauderdale offered a stimulating and by no means one-sided commentary on some of the blemishes in Smith's great work. Bentham and Godwin added volumes on political science, morality, and jurisprudence, but none of primary significance for economics. No departures of any moment were attempted. The materials that were piling up for a revision had not yet fallen into right hands, and obscure authors labored unrewarded. The times too were not propitious, since the French Revolution had begun to overshadow everything else. Thinking people watched the drama at Paris. The progress of events first pleased, then baffled, then disgusted, and finally frightened observers into apathy or vehement protest, according to temperament and responsibilities. Normal interests were forgotten over the incredible, grotesque, terrorizing news from across the Channel. A Burke was more likely to be heard than a Godwin, though both had an audience to appeal to. And then the wars, the defensive ones of the National Convention, the retaliatory of the Directory, and the aggrandizing of Napoleon Bonaparte! Twenty years of campaigning in which the resources of all Europe were pressed into service. So far from our wondering at the paucity of economic literature during this epoch we should rather marvel at what was written. For after all there was Germany and France whose appreciation of Smith had many echoes, to say nothing of the idealistic philosophy, of literary romanticism, and the communistic propaganda of French reformers.

In Germany the first translation of the "Wealth of Nations" appeared as early as 1778, though the better ones came later, of which many editions seemed needed to satisfy a widespread demand. If one may believe Roscher,

who went into the question, the reception accorded to Smith's ideas was not cordial everywhere, yet there came forth scholars from all sides who openly espoused the new cause. Hostile reviews were the exception. Indifference prevailed at first among the older group of economists, but this too gave way to a willing examination of the English masterpiece. The greatest handicap for any systematic treatise was not the German's personal bias, but his immersion in either Kameralism or metaphysics. Those specializing in economics had not yet learned to distinguish between science and art, or between economics in particular and moral philosophy in general. The intellectual ancestry of German economics was against its becoming easily a science of universal laws. As we have seen, the practical aim everywhere determined the lines of investigation. Theology had not lost its hold on Kameralism. Theories of state vitiated economic analysis. The center of interest was not the individual, but the community or the dynasty. But on the other hand the genius of the people shone most brilliantly in speculations on the Infinite and Unknown, Kant opening a new era by his metaphysics and ethics, while Fichte, Schelling, Hegel and Schopenhauer continued the search for an Ultimate Reality. Schleiermacher was more native to German soil than a Utilitarian could ever have been. The perspective of a Goethe did not fit in well with the exhortations of a Fichte that his countrymen become clear-sighted and practical. Herbart's psychology was intelligible because it formed a part of the reaction against transcendentalism; but empirical studies like the British would nonetheless have had a hard fight. Characteristically the German philosophers said little or nothing on economics, Fichte's half-socialistic work being a notable exception, and for teachers on the subject nothing counted more

than the *political* bearing of Manchestrianism. To them the commercial question was fundamental. If economics really was a science, then it should have advice to give to princes and merchants.

Put differently, Adam Smith was appreciated by the German economists either because he urged free-trade, or because flaws in his reasoning played into the hands of the protectionists. The national movement favored this prejudicial treatment of his work. Nothing seemed left after the final collapse of the "Holy Roman Empire" except a rebuilding with materials that would speedily unite all parties by concerted economic action. And what was more calculated to rehabilitate the impoverished land than a customs-union embracing the whole German race? A plea for Non-Interference therefore not only offended believers in an enlightened autocrat, but besides was incompatible with a strong nationalistic sentiment. Only in one respect had British economics a chance among Germans, namely in that the whiff of democracy and personal liberty animating it was welcome to progressives and broad-minded statesmen like Hardenberg and Stein, who saw what was wrong in Prussia, who divined the causes of the German defeat, and desired a break with the past more than anything else. So far of course they could see good in the French Revolution, and still more in a social science whose first premise was the self-direction of individuals for their personal good.

The critics, for this reason, could not carry the day without adopting in large part the principles of the Scotchman. Though exception was taken to details, and doubt was expressed as to the universality of the laws proclaimed by the author, his general viewpoint won instant applause. Men like Kraus, Sartorius, Lueder, Luden, Hufeland, and Lotz undertook to acquaint the

German public with the Laissez Faire doctrine. Jakob, whose strength was philosophy even more than political economy, defined the latter, not quite in the manner of Smith, as the "science dealing with the nature and causes of national wealth, with regard for the influence of social institutions and positive legislation." [1] His contemporary, Mueller, injected a theological tone into the matter, and dwelt more on policies than on theory. To him "the state is the greatest of all needs of man, the need both of his heart, his mind, and his body. Man without the state can neither hear nor see nor think, feel, nor love. In short, man apart from the State is unthinkable." [2] Sentiments like these deserve mentioning because it is easy to exaggerate the fidelity with which the Germans copied Adam Smith. When all is said and done, their imitation did not consist in a granting of the premises which Smith took from a long line of ethicists, psychologists, political philosophers, using them discriminatingly in developing his "Theory of the Moral Sentiments," but rather in an agreement to his main conclusions, or to his analysis of price and income. His account of the mercantilistic program is noted more frequently than his logical innovations!

There was indeed something lacking in the perfection of the work so long as its external structure was not rebuilt by a more skillful designer. And so one might argue that a considerable measure of the influence exerted by the "Wealth of Nations" is due, not to its intrinsic merits, but to J. B. Say, the Frenchman, who for the first time gave economics a definite form, putting his materials under precise captions, thus inaugurating a custom that has never been abandoned since.

[1] Quoted by Roscher, W. Geschichte der National Ökonomik, in Deutschland, 1874, p. 688.
[2] Elemente der Staatskunst, 1808, Introduction.

As in Germany, so in France translations of Smith were swiftly undertaken, the first dating from 1781, and others from the next decade. There was enough call to justify several editions, for in the first place the Physiocrats were more akin to Smith than the Kameralists, and in the second place France had for a century found inspiration in British thought and policies. Thus the interest of Frenchmen, which between 1790 and the establishment of the Empire in 1805 had been focussed upon legislation and politics, passed easily over into respect for a doctrine which purported to outline fundamentals of government. A treatise on political economy, if decked out in suitable dress, could hardly fail to impress the heirs of Physiocratism.

Say must therefore be regarded as a notable factor in the dissemination of Smithian ideas. He popularized the new economics by restating it in precise terms, adding elegance and verve to the flow and clarity with which Smith himself had written. But what is more, he divides his subject into three main parts, all of which together constitute, as he takes pains to make clear, the science of economics.[3] Production is first treated, just as in the "Wealth of Nations," but to the exclusion of a price analysis. On the contrary, exchange is incorporated with Book One because, unlike Smith, Say conceded a productive value of services other than those of manufacturer or farmer. Exchange hence is a specie of production, and probably in harmony with this concept much is said in the first part on commerce and currency. Book Two then discusses distribution, that is the apportionment of the annual income among the producers, value and price being dealt with ahead of the revenues of land, capital, and industry. In the fourth French

[3] Translation of Prinsep, C. R., 1821, edited by Biddle, C. C.

edition we are told at the beginning of the chapter on distributive laws that "the causes, which determine the value of things, and which operate in the way described in the preceding chapters, apply without exception to all things possessed of value, however perishable; amongst others therefore to the productive service yielded by industry, capital, and land, in a state of productive activity."

This surely is something worth while—an amplification of Smith's treatment that cannot be rated too highly. Price hereafter will figure as a bundle of income-shares. To explain price is to explain shares. Distribution and Price, as categories in economics, are complementary like two sides of a piece of paper. We can consider them separately, but they belong together. It agreed with this scheme that Say placed utility above labor in the accounting for value, and made expenses contain much more than what Smith had at times permitted himself to insinuate. Indeed, Say went so far in his stress of the subjective side of value that he despaired of being able to measure it exactly, mainly because "subject to the influence of the faculties, the wants and the desires of mankind." Ganilh, a few years later, echoed this sentiment of his countryman, but without being as sure of the method by which economics was to succeed.

To Say the method of economics was as settled a question as the external structure. If in Book Three he considered Consumpton, including Public Finance, this was an acknowledgment of the human basis of social events, the wants and rights of a consuming public being the terminal as well as the point of departure for economics. Consumption, he saw, could not be ignored in an examination of revenues. The interest of the government in consumption was as natural as once had been its interest

in trade or manufacture. But precisely on this account it followed that the method of economics had much in common with that of other sciences; for a few postulates pivoting on facts of human nature would suffice to develop an imposing superstructure. So we are informed: "Political economy, in the same manner as the exact sciences, is composed of a few fundamental principles, and of a great number of corollaries or conclusions drawn from those principles." [4] Deduction must predominate, even though the inductive kind of reasoning is preferable where possible. Say's "Treatise on Political Economy" bears out this thought, for in spite of much illustrative material the argument proceeds from premise to conclusion, and from the latter used again as a premise, to further assertions quite in the style of David Ricardo. Not that the treatment is as bare or rigid on the surface, but the underlying characteristic is the same.

Logic was a strong point with Say, as may be further seen from his criticism of Smith's definition of production. To debar personal services from this class does not seem right to Say who argues, à propos of a physician's work: This industry, "as well as that of the public functionary, the advocate or the judge, which are all of them of the same class, satisfies wants of so essential a nature, that without those professions no society could exist. Are not then the fruits of their labor real? They are, so far as *to be purchased at the price of other and material products* which Smith allows to be wealth . . . " [5] [italics mine]. Any service from this standpoint represents value, from which follows incidentally that the value of the use of capital must be distinguished from the efforts of the enterpriser who uses capital. Thus profit and

[4] Ibidem, p. xxviii.
[5] Ibidem, p. 63.

interest are two different things. The entrepreneur view overbalances Smith's collectivism, and emphasis is shifted from production to distribution. The earlier works of Garnier and Sismondi see nothing amiss in this modification, but as is well known, protest grew stronger with years.

Smith and Ricardo.—For the time being however the field belonged to individualism, thanks first to the antecedents upon which Utilitarianism could draw, and secondly to the kind of men who continued the labors of Smith. It was not an accident that Ricardo's "Principles of Political Economy and Taxation" attained such wonderful vogue, nor that from the beginning he ignored the foundations of Smith. Smith the Scotchman who exchanged Presbyterianism for Deism, and Ricardo the Portuguese converted from Judaism to Christianity! Morality for the one basic to all social life, and for the other a personal item that had nothing to do with the problems of science!

To put the two men, therefore, and the groups of thought they represent, into one class is to do violence to important facts; for even though they have much in common, on more than one vital point they part company. Ricardo frankly admitted this estrangement. He was as fearless in criticizing as he was generous in his thanks. That Smith had blazed the path which others must start with, was never denied. The question was merely how far the trail might lead, and where a turn should be made. Ricardo by his concise and trenchant comment on Smith answered these questions. He caused economic thought to move away from the original direction. He made it virtually impossible for us to speak of a "classical" economics; for either we mean by it the Utilitarian outlook, or we confine it to the Naturalistic

presentation of Smith and the Physiocrats. In the former case the founders are non-classical; in the latter case classicism died almost at birth, as a study at close range of the two respective systems will soon convince us.

TABLE ONE

CHARACTERISTICS OF SMITHIAN AND RICARDIAN ECONOMICS COMPARED

Smith	*Ricardo*
Naturalism	Utilitarianism
Theism	Agnosticism
Social Instincts (Sympathy)	Hedonism (Associationism)
Collectivism	Individualism
Progress	Happiness
Historical Viewpoint	Static Viewpoint
Stress on Production and Exchange	Stress on Price and Distribution
Division of Labor, and Rising Returns	Sex Instincts, and Falling Returns
Wages pitted against Profits	Wages pitted against Rent
Rent as Monopoly, in Price	Rent as Differential, not in Price
Rising (Super-) Wages	Subsistence Wages
Foreign Trade according to Absolute Cost Differences	Foreign Trade according to Relative Cost Differences

The accompanying Table may serve to enlighten us on the subject. Naturalism in the hands of Smith, it will be noticed, started with theistic beliefs—very definite and persuasive ones—and ended with an optimistic version of the wages-problem, if applications to foreign trade may for the moment be set aside. By Smith the innate goodness of man is appealingly brought forth and the power of conscience portrayed. We are told much of sympathy and little about selfishness. The weal of all is never overlooked. On the contrary the only definition for economics ever offered refers to its art-aspects, to its principles of policy. The thing finally aimed at is social progress, in so far as economic means and methods may subserve that end independent of theological or moral criteria.

Production and exchange therefore are treated largely in a non-competitive spirit. The lessons of history are invoked to lighten the way of the statesman. He is to measure materials and labor-power rather than rights or incomes individually computed. Division of labor figures as a link in the chain of universal progress. National dividends and not personal shares; returns as consisting of stuff, and not of titles to it; output to be deemed more important than the laws of pricing!

So the "Wealth of Nations" implies the existence of a super-wage that none can take from labor; or if a conflict is to be thought of, it is between profit and wages rather than between landlord and artisan. Rent of course is part of price, and if goods fail to enter the foreign markets it is not on account of tribute paid to land, but because of absolutely higher costs of production, the law of self-interest operating under like conditions everywhere.

Ricardo, as we know, preached a less reassuring doctrine. To him life was earnest, and the outlook gloomy for the masses. Instead of reliance upon the deity he professed what amounted to agnosticism. Instead of individualism mitigated by the inherent virtues of self-interest he shared the views of Bentham and Mill, hedonism being psychologically proven and ethically either invalid, or perfect—the latter seeming most reasonable. The egotistic bent of man, in other words, called for actions which were right, however honest the protestations of the injured. Collectivism was out of place; one must keep it out in order to give economics a scientific validity. Take the world as it is. Study it at a given instant of time. Let that snapshot suffice for purposes of research, and the laws you obtain or the applications you seek will be worthy of anything done by

the physicist. Happiness must be sensually measured if wants and wealth are to become definite quantities. Pleasure and pain, and not progress of which historians might sing! Price as the central problem of the economist, and income as a share imputed to parties legally instrumental in creating products. "The produce of the earth . . . all that is derived from its surface by the united application of labor, machinery, and capital, is divided among three classes of the community, namely the proprietor of the land, the owner of the stock or capital necessary for its cultivation, and the laborers by whose industry it is cultivated." [6] A remarkable statement indeed! A notification that must have astonished the reader, had he not by other channels been kept constantly in touch with the moods of the day. "To determine the laws which regulate this distribution is the principal problem in political economy" [7]—another departure from the accustomed, and one destined to outlive Utilitarianism itself.

Sex instincts and diminishing returns, rents that did not enter into price, wages kept low through the laborer's own folly, and yet a far-reaching admission (in the discussion of foreign trade) as to the limits of mobility for labor and capital—these comprise some of the salient features in the Ricardian scheme that the eighteenth century had led up to as truly as it had molded the creed of Smith. It was plain that Laissez Faire after Ricardo would mean more than the Physiocrats had intended, and that for all the adherence to a Smithian terminology or its outward form the contents of economics had to change. The fact that Ricardo was a banker by profession favored this presumption, but the new economic organiza-

[6] Ricardo, D., Principles of Political Economy, Preface.
[7] Ibidem.

tion developing in England, the advent of machinofacture and world commerce, as well as the force of certain personalities back of economic investigations, furnish the final reason. Utilitarianism had too many friends to fail of economic expression!

Utilitarian Economics Defined.—What then were the main characteristics of Utilitarian economics? The answer is: A hedonistic psychology, a derivation of group incomes from laws of human nature, the measurement of prices by objective costs or returns, and the assumption of certain human instincts as the basis for individual freedom in production and exchange. Such were the ideas principally exploited by the successors to Adam Smith, and it must be borne in mind that Utilitarian tenets figure prominently in treatises written even during the last few decades, even though on the other hand the Marginal viewpoint, which has dominated most economic writing since 1890, took root when Utilitarianism was still at its height. The two ways of looking at economic life and of analyzing price and income overlap, but they also share in common a few fundamentals that the Utilitarian economists first gave currency between 1820 and 1850.

The legal premises of course were taken over directly from Adam Smith and the writings that stimulated his thought. What the author of the "Wealth of Nations" had taken pains to demonstrate step by step, starting out from facts of human nature, and winding up with applications to questions of commercial policy, all these theorems of Non-Interference the Utilitarians adopted without further ado. They made an axiom, as they would doubtless have admitted, out of the arguments of their predecessor. But they also made contributions of their own, incorporating into their economics a psychology

and logic that Smith had treated with indifference. One may distinguish therefore the one from the other by remembering that Smith was steeped in theology, in idealistic ethics and a theory of human progress, while after his time description superseded purpose, and a concern for profits the notion of social welfare.

The objective viewpoint governs the analysis of price and of shares going to producer-groups, in which respect Utilitarianism differs notably from Marginal economics; but the subjective approach is presaged by the persistent reliance upon states of consciousness and of the emotions as a key to personal valuations. Motives become very important. Pleasure and pain become words all too familiar in the vocabulary of the Ricardians. Rising and falling degrees of want for present goods are coupled with more or less vivid recollections of former experiences. Differentials of a psychic sort mingle with those esteemed most highly in the determination of values. Utilitarianism everywhere fortifies its positions by authorities in non-economic fields, and what is more, the British stamp is never lost, no matter whose work we have before us, be he Frenchman or Teuton. An acquaintance with English and Scotch philosophical and psychological thought is valuable precisely because of this supremacy of the Utilitarian principle in orthodox economics between, say, 1800 and 1870. The dissenters, as will soon appear, are not a few in number, nor can the merits of the historical movement which steps between Utilitarianism and Marginism be easily overrated. Yet there remains the paramountcy of the so-called "classical economics" and the conspicuous rôle played by later neoclassicists up to our own day.

Utilitarian Psychology.—The ideas which Utilitarian economics wove into its story were substantially the same

that Locke had first submitted to metaphysicians, and that Hartley and Hume had further developed for purposes not by any means economic. By 1750 this sensationalistic psychology was already full-blown, but it devolved specially upon James Mill, the father of John Stuart Mill, and upon such wellknown thinkers as Alexander Bain and William Whewell to perpetuate its leading doctrines and to provide the data for J. S. Mill, the logician and economist, in his attempt at a systematic exposition of social science. Thus, through the agency of a comparatively few men Utilitarian economics acquired its premises; thus the "economic man" could become a subject for studies that have preoccupied many an industrious scholar.

So far as the argument for the "economic man" is concerned it ran somewhat like this. All ideas are derived from sensations or from other simpler ideas themselves due originally to stimuli from without. Ideas are built into complex groups of notions and trains of thought. Furthermore, these latter are due to certain principles of association which also account for our belief in the regular recurrence of events outside. Feelings accompany ideas, and are transformed into emotions aroused either centrally, or directly by objects about us. Reflection is a powerful aid in the development of ideas and ideals. On reflection the principle of association begins to operate, and this applies to the feelings no less than to ideas.

Among the most important ideas are those of pleasure and pain, notions which must necessarily accompany the great majority of sensations, and from which an infinite variety of judgments have sprung that are raw material for the would-be moralist. Pain and pleasure, however, though not all due directly to sensations, remain always

quantitative items, that is, they vary in assignable respects, but because of the materialistic basis of sensation cannot contain more than *degrees* of intensity, duration, uniformity, etc., etc. The greater this quantity the more powerful the reaction of which we become conscious, namely, a desire or aversion to do. Endeavor is the inevitable concomitant of pleasure remembered or administered, and this is known to us as a wish or unwillingness. Pleasure and pain, then, measure desire or aversion, and vice versa, the intensity of desire being an index of the amount of pleasure felt or anticipated as the case may be. *Now, since pain and pleasure blend in almost all our reactions, and since on the other hand, ideas are governed by principles of association which group them according to experiences in our physical or social environment, it follows that first, economic motives have no superior, and secondly, laws of consciousness may be established, some governing the field of economics, and others ruling in other fields.*

Further, as to the rôle of ethics in economics, supposing this question were to be considered at all, we have no choice but must identify the good without exception with the possession of pleasure or the freedom from pain. Utility is something pleasurable, and both are equivalent to virtue or happiness. The quantity of pleasure and good will vary, but qualitative distinctions are absurd, for pleasures are nothing but quantities physiologically traceable if our instruments are delicate enough. Two important facts must, however, be kept in mind with regard to this sensational basis of the good; namely, in the first place, the laws of association prompt us frequently to value things which at first were only means to the desired end, the shifting adding greatly to our range of desires, and in the second place it is *results* that count,

and not motives. Hence, if we were to take a social view of the problem, we might easily show why maximum happiness of the greatest possible number is the best test for morality. In this sense consequently economic and ethical facts deal with the same subject, but of course there was no reason for bringing in the question of a goal, since in a perfectly natural manner men did what tended toward the highest good.

Curiously enough the Utilitarian economists did not develop the subjective aspects of pricing, nor as a rule preach hedonistic ethics. Instead they dealt with costs and demand as objective facts, while on the other hand doubting, or renouncing, the moral implications of their psychology. Even Hume compromised when it came to a decision on this important matter. He declared frankly that "the chief springs or actuating principles of the human mind are pleasure and pain; and when these sensations are removed, both from our thought and feeling, we are in a great measure incapable of passion or action, of desire or volition"; [8] but nevertheless he identified the good mainly with benevolence and sympathy. Virtue to him had a social aspect far removed from the craving for pleasure.

However, it is in Hartley, and not in Locke or Hume, that hedonism is given its final and most convincing form, the hint being taken from John Gray's essay of 1731; and from now on we find the theory prospering with which Bentham is commonly associated, though as a matter of fact he added very little of his own. Tucker and Paley had anticipated Bentham in the clear formulation of a universalistic hedonism. James Mill was chiefly responsible for the vogue it obtained in economics. Bentham himself made it a slogan for reform in politics and

[8] Treatise, Book III, Part III, § 1.

criminal law, but originality can hardly be credited to him. What he contributed was an elaboration rather than an initial suggestion, as a study of the literature will show. Hartley in 1748 had this to say: "Our passions or affections can be no more than aggregates of simple ideas united by association. They must be aggregates of ideas, or traces of the sensible pleasures and pains which ideas make up by their number and mutual influence upon one another." [9] . . . "Since the things which we pursue do, when obtained, generally afford pleasure, and those which we fly from affect us with pain if they overtake us, it follows that the gratification of the *will* is generally attended with, or associated with, pleasure, the disappointment of it with pain. Hence a mere *associated* pleasure is transferred upon the gratification of the will, a mere associated pain upon the disappointment." [10] Further, "the associated circumstances of the pleasures are many more than the pleasures themselves. But these circumstances, after a sufficient association, will be able to excite the *motions* subservient to the pleasures, as well as these themselves; and this will greatly augment the methods of obtaining pleasure." [11] Finally, "all the pleasures and pains of sensation, imagination, ambition, self-interest, sympathy, and theopathy [love of God], as far as they are consistent with one another and . . . with the course of the world, *beget in* us a moral sense, and lead us to the love and approbation of virtue, and to the fear, hatred, and abhorrence of vice. . . ." [12] Thus experience entails "the deduction of all our moral judgments, approbations, and disapprobations from association alone." [13]

[9] Observations on Man ———, 1748, vol. 1, p. 368.
[10] Ibidem, pp. 368-70.
[11] Ibidem, p. 112.
[12] Ibidem, p. 497.
[13] Ibidem, p. 499.

In this way hedonism became scientific, somewhat on the principle that Karl Marx sought to give a scientific tone to his demand for social reform. The association law was used to explain the rise of a desire for pleasure even when the thing aimed at did not itself gratify the senses.[14] The happiness of men was held to flow from their acting on remembrances no less than on stimuli at work. Tucker elaborated this idea in 1768 in his "Light of Nature Pursued." Qualitative differences between pleasures were expressly denied.[15] The stress was on gratification for its own sake, saving only the abstract view of happiness for the greatest number. The Baron d'Holbach had in 1771 in his "System of Nature" given a finished form to this sort of hedonism with the aid of a materialistic metaphysics. Like Helvetius and Cabanis he had eulogized the perfection of the human mechanism which found its end, its pleasures, in the natural unfolding of its capacities. "The object of all his [man's] institutions," he wrote, "of all his reflections, of all his knowledge is only to procure that happiness toward which he is incessantly impelled by the peculiarity of his nature."[16] Man being a purely physical structure all consciousness is motion, and sensation the root of ideas. Truth could not emanate from anything else but a correct association of ideas . . . as shown by Locke and Hume whom d'Holbach followed closely. . . . Happiness, therefore, is "the coördination of man with the causes that give him impulse"; [17] and "legislation is the art of restraining dangerous passions, and of exciting those which may be conducive to the public welfare."[18]

Considering that this passage antedates Bentham's

[14] See for instance Tucker, A. The Light of Nature Pursued, 1768.
[15] Ibidem, Part I, ch. 16, § 1.
[16] Vol. 1, ch. 1, transl. by Robinson, H. D., 1836.
[17] Ibidem, ch. 9.
[18] Ibidem, ch. 17.

"Fragment on Government" by five years we must be interested in it, even though it was Bentham alone who influenced the two Mills, father and son. But indeed, Paley in his "Principles of Moral and Political Philosophy," 1785, had also expressed himself in words reminding one of Bentham.[19] Not only had the phrase "greatest happiness of the greatest number" been coined by that time, but the increase of population as a proof of quantitatively growing happiness was urged by Paley.[20] If, therefore, a wide-awake thinker like Comte could write to J. S. Mill in 1841: Bentham is "the main origin of what is called political economy," he must have had in mind the general moral effect of Bentham's diatribes rather than his psychology.

Yet Bentham may well be put in a class by himself, for no one man reflects more faithfully the temper of Utilitarian economics. In his works a religion is made of what Smith considered a misunderstanding of facts. We are told in the first paragraph of the "Introduction to the Principles of Morals and Legislation," 1789, that "nature has placed mankind under the governance of two sovereign masters, pain and pleasure." . . . "They govern us in all we do, in all we say, in all we think; every effort we can make to throw off our subjection will serve but to demonstrate and confirm it." [21] And so we read in the posthumous Deontology: "To obtain the greatest portion of happiness for himself is the object of every rational being. Every man is nearer to himself than he can be to any other man; and no other man can weigh for him his pains and pleasures." . . . "Dream not that men will move their little finger to serve you, unless their advantage in so doing be obvious to them."

[19] See edition of 1811, Book II, ch. 6, at the beginning.
[20] Ibidem, p. 470.
[21] Opening paragraph.

In his comment on the "Table of Springs of Action," to be sure, four numbers are given over to moral or religious motives,[22] sympathy too appearing in the list; but at bottom of course there was no need of such distinctions, since all pleasures and pains were quantities only. In fact, Bentham warns us more than once that there are no good or bad pleasures or desires.[23] The idea of a Moral Sense is, partly in this spirit, scorned as a child's fancy. Neither natural law nor social compact nor intuition have anything to do with ethics, nor are they necessary to explain our actions. We seek pleasures, and that is the alpha and omega of social processes. Aversion, not desire, for instance, "is the emotion, the only emotion, which labor taken by itself is qualified to produce. . . ." [24] Economics has to deal with this fundamental in human nature. It turns on questions of utility and sacrifice as our hedonistic bias defines them. "Utility is that property in any object whereby it tends to produce benefit, advantage, pleasure, good, or happiness . . . or to prevent . . . pain, evil, or unhappiness to the party whose interest is considered." [25] Desirable results consist of such possession of happiness. The *results* count, not our intentions. Action is good or bad, we are told, according to the "sum total of its consequences." [26]

Bentham, as remarked, found enthusiastic support in influential circles. James Mill, well reputed for his "History of the East India Company," in 1829 published his still more important "Analysis of the Phenomena of the Human Mind" on which his son John Stuart Mill was brought up, and whose merits impressed men

[22] See edition of 1817.
[23] Ibidem, Observations.
[24] Ibidem.
[25] Principles of Morals and Legislation, ch. 1, § 3.
[26] Ibidem.

like A. Bain and H. Spencer. James Mill goes back chiefly to Hartley for his associationism, but he also admires Bentham. The whole problem of logic, ethics, and education he believes to find a solution in the principles of consciousness as the eighteenth century writers in England had described it. All phenomena of thought are either intellectual or active. In the former case we deal with sensations and ideas; in the latter with feelings and will. But *both* sets of facts are subject to the laws of association, and not merely the former. The old philosophy of Locke, Hume, and their epigones is presented once more, and the moral sense dismissed as a useless fabrication. The line of division, James Mill in an unguarded moment notes, is not between intuitions and experiential judgments, but rather between the moral and the useful, the first being a human thought, but the second a fact inherent in objective conditions.

Needless to say, this slip means nothing serious. The rupture between moralism and hedonism came not in James Mill, but in his son, and then only after Utilitarian economics had reached a definite form. Whewell, whose "Elements of Morality," 1841, enjoyed popularity, and who influenced J. S. Mill through his "History of the Inductive Sciences," may have encouraged this departure from pure hedonism. On the other hand there is the "Autobiography" in which J. S. Mill confesses that as early as 1827 he came to believe that true happiness is attainable only by "*not* making it the direct end." [27] Since then apparently he became more and more dissatisfied with the Benthamite doctrine, and later tried hard to reconcile the old interpretation of the laws of consciousness and of human nature in general with a milder ethics.

[27] Ch. 5.

That he failed is a commonplace to students of philosophy and ethics, but economists have rarely benefited by it. Or to put the matter differently: It has been overlooked that Mill in his "Utilitarianism," [28] planned in the early fifties, breaks definitely with a large part of the premises underlying his "Principles of Political Economy" written between 1845 and 1848. Not only that, but this latter work itself is marred by an ethico-historical outlook which, however creditable to the man and his broader philosophy, made impossible a clean-cut presentation of hedonistic economics. We feel too much the force of ideas like these: "The firm foundation [of altruism] is that of the *social* feelings of mankind, the desire to be in unity with our fellow-creatures, which is already a powerful principle in human nature, and happily one of those which tend to become stronger . . . from the influences of advancing civilization." [29] Or again: The end of happiness is "the highest and most harmonious development of his powers to a complete and consistent whole." [30] Even then if "will is the child of desire," [31] something depends on the *kind* of desire. Even if "the sole evidence it is possible to produce that anything is desirable is that people do actually desire it," [32] yet there are desires of various meaning to society. J. S. Mill candidly confessed [33] that Hartley's associationism should be used as a key to meliorism, but expected sharp discrimination on the part of students between egotistic and social values. On the ethical side, therefore, psychology could not appease the idealistic yearnings of a

[28] See his definition of the word in ch. 2.
[29] Ch. 3.
[30] Essay on Liberty.
[31] Utilitarianism, ch. 4.
[32] Ibidem. See also ch. 1.
[33] Mill's Autobiography, ch. 4.

J. S. Mill, even though as a groundwork for logic and methodology he found it most valuable.

Hence, in passing over to the methodological basis of Utilitarian economics we must not associate it too narrowly with Mill's "Principles of Political Economy." The former owes its strength and precision largely to the assumptions first succinctly stated in Mill's "Logic" (published in 1843; but the "Principles" contain both more and less than the "Logic" allowed. It was what J. S. Mill tried to prove and do, and not what he succeeded in proving or doing, that discloses to us the connection between Utilitarian and Naturalistic economics.

J. S. Mill's Eclecticism.—To go a little further into this matter. If one looks for iron consistency in J. S. Mill one is certain to be disappointed, for a mind filled with as many divergent views as Mill's, and as sympathetic toward the old and the new in all fields of scientific or social endeavor, was not likely to concentrate upon one single system of thought. The title of his treatise on economics is itself symptomatic of the position in which he found himself as student and citizen. He discusses "Principles of Political Economy with Some of Their Applications to Social Philosophy." He combines in it the views of Ricardo and Senior, Malthus and James Mill his father, Th. Chalmers and John Rae, Adam Smith and R. Jones. He is not unmindful of the advice given by men like Th. B. Macaulay, or by A. Comte, the creator of a Positive Philosophy. He shows historical leanings even while emphasizing the static premises underlying Utilitarian economics. He knows the eighteenth century philosophers and writes brilliantly on Sir William Hamilton and Whewell. He follows with interest the communistic theories on the continent and takes up the cause of political democracy. Intuitionism

and undiluted hedonism both leave their impress on his theory of the Good. He gives us "A System of Logic, Ratiocinative and Inductive" when little over thirty years of age, and many years later his maturest thoughts on "Liberty" and "The Subjection of Women."

He is an empiricist who, on the whole, agrees with the phenomenalism of David Hume. Agnosticism grows on him even while he wishes for a divine justice. Statics and dynamics, the Laissez Faire of Smith and scientific paternalism, hedonism and eudæmonism,—these and other differences are considered and given a respectful hearing. No wonder that his "Logic" preaches what the "Principles of Political Economy" did not apply. No wonder that breadth entails a scattering of ideas, and Mill the man is greater even than Mill the thinker. No mortal could sum up so much of the creeds and interests of his day without sacrificing something of the inner unity of argument. Mill stands out as the culminating figure in Utilitarian economics, but one must judge him by his premises and ideals rather than by specific contributions made to the subject.

Or rather, it seems better to view his economic treatise as a minor work, which cannot yield the full measure of its wisdom without being read in the light of his earlier thought. It is the philosopher that speaks in the "Principles" even more than the economist. It is from the standpoint of an eclectic who seeks to reconcile diverse beliefs that he made bold to restate what he deemed fundamental to social science and durable in Smith's "Wealth of Nations." His ethology saw no development. His methods were those of a speculator in ultimate values. His utilitarianism broke down as he himself practically confessed. But as the archtype of Utilitarian economics in the narrow sense he was enabled to give to the world

everything essential. We cannot do better than study J. S. Mill, even if he wrote retrospectively for the most part, and not prospectively.

J. S. Mill's Methodology.—Indeed, this preëminence of Mill the economist will be granted the less reluctantly since his methodology is incomparably the most complete in economic literature. The eighteenth century thinkers in England had, as shown, attempted to base sociology upon an analysis of human nature; but the recondite problem of the method and delimitation of social science they hardly touched. There are no logicians for us to consult on this point. Neither Hobbes, Locke, nor Hume had gone beyond the generalities of social logic. The Moralists—excepting Hartley and Ferguson—had not even suggestions to make. Realists like Th. Reid, D. Stewart, and Sir W. Hamilton continued to emphasize problems of epistemology.[34] The prevailing viewpoint was the empirical, although of course tinged phenomenalistically in Hume's style; but the theory and history of Induction had not yet found a worthy expounder. Even thinkers like Th. Brown, the author of the "Lectures on the Philosophy of the Human Mind," published in 1820, and J. F. W. Herschel whose "Preliminary Discourse on the Study of Natural Philosophy" (1831) [35] was not without influence on his generation, contributed little to the topic that J. S. Mill made his own by one single stroke, in the publication of his "System of Logic, Ratiocinative and Inductive" in 1843.

It is here that we find heaped up in one volume all the elements that were useful in the formal development of

[34] Whewell's (W.) works, though important for Mill's treatment of logic, did not deal with methods in social science. For Stewart (D.) on causation see his Elements of the Philosophy of the Human Mind, Part II, ch. 2.

[35] See his remarks on law and cause in the original edition, vol. I, p. 85, etc.

economics as a science. On the psychological side these factors were the acceptance of human nature as the key to social processes and to economics in particular; the rejection of free-will—as formerly understood—and the establishment of a causal nexus between all states and actions of consciousness; the derivation of ideas from impressions, the dualism of Mind-Matter being implied though not openly acknowledged; the stress on association principles and on the transfer of desire from an original end to means for securing it; and not least of all the supremacy of the pain-pleasure calculus. But on the logical side we have also to note as important: the sharp differentiation between induction and deduction; the reliance upon Newtonian forces as a model for psychic forces which, within the social process, gave rise to either a composition or a chemical reaction of elements. And then again there was the addition of a dynamic to the static concept, methods of proof being adapted to both, according to viewpoint or materials studied by the economist.

The earlier part of Mill's "Logic" [36] contains much of significance for his sixth Book in which social science is given its methodology. It is on the ground of Mill's definition of "Cause," and of the difference between mechanical and chemical interrelations of events that economics is eventually recommended to a deductive method, the reservations to the contrary being of a minor sort.

Cause is defined as "the sum total of the conditions, positive and negative, taken together; the whole of the contingencies of every description, which being realized, the consequent invariably follows." [37] But early in his treatise Mill points out the decisive difference between

[36] The edition here used is that of Harper Bros., New York, 1874.
[37] Book III, ch. 5, § 3.

a case where several causes act merely by way of summation, and another in which the effect is quite unlike the causes, as for instance in a compound built chemically out of its elements. The recognition of this difference Mill records in his "Autobiography" as a memorable moment in his life. He says: "I now [that is shortly before 1830 probably] saw that a science is either deductive or experimental according as, in the province it deals with, the effects of causes when conjoined are or are not the sums of the effects which the same causes produce when *separate*. It followed that politics must be a deductive science." [38] And again in his "Logic": This also "explains why mechanics is a deductive or demonstrative science, and chemistry not. In the one we can compute the effects of all combinations of causes, whether real or hypothetical, from the laws which we know to govern those causes when acting separately; because they continue to observe the same laws when in combination, which they observe when separate. Whatever would have happened in consequence of each cause taken by itself, happens when they are together, and we have only to cast up the results. Not so in the phenomena which are the peculiar subject of the science of chemistry. There, most of the uniformities to which the causes conformed when separate, cease altogether when they are conjoined; and we are not, at least in the present state of our knowledge, able to foresee what result will follow from any new combination, until we have tried it by *specific experiment*." [39] The first is an instance of the Composition of Causes; [40] the last one of chemical action.

Nonetheless, Mill admits that in either case the law of

[38] Page 160.
[39] Book III, ch. 6, § 1.
[40] Ibidem.

plurality of causes is important, meaning that while a cause may be regularly followed by the same result, yet this effect may be due to more than any one given cause.[41] Hence, while Mill's underlying thought is really a *quantitative measurement of events* in the spirit that physicists measured mass and force, social events become perplexing through the intricacy of causal relations, and through an Intermixture of Effects that the natural scientist is scarcely aware of. In short, the fact that social students can aim only at *tendencies* in the long run,[42] not at exact magnitudes for a particular series, is explainable through this interweaving of countless events whose numbers may never be determinable. So the Canons of Induction find a limit, to say nothing of other objections.

Now, this analysis of the causal nexus proved momentous for the working out of economic methodology, not merely in Mill's work, but in the subsequent inquiries which after all did not go much beyond Mill.

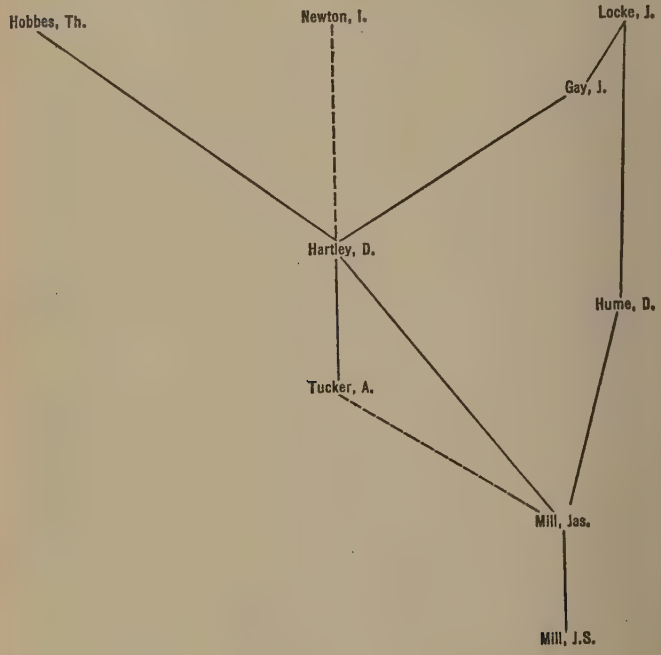
But we must first look at the psychological substratum on which the classic doctrine was erected. Namely, the application of Mill's inductive logic to social science, though ever kept in mind, and perhaps the occasion for the inductive teachings in general, came only through eighteenth century sensationalism, whose essentials Mill had mastered early in life.

At the outset the doctrine of free-will is abandoned as untenable in the light of associational psychology.[43] It is shown that mental states follow a set of laws as genuine as the Newtonian. Motives are held to proceed from ideas, and these from impressions whose interconnections obey certain well known laws of association (of resemblance, continuity, and contiguity). The teleologi-

[41] Book III, ch. 10, § 5.
[42] Ibidem.
[43] Book VI, ch. 2, § 3.

cal notion of theologians does not stand an acid test; of that Mill is convinced. Causation rules universally; the purposive view of human actions is simply *one* way of look-

Chart Three—The Sources of J. S. Mill's Psychology



ing at a situation whose final meaning the moralist will never grasp.

Hence too the way to economics lies through psychology, ethology, and sociology, the first giving cues to all the rest.

Mill in this matter departed not at all from his prede-

cessors. He built on Hobbes—indirectly and to a degree —on Locke, Hartley, Hume, and his father, Jas. Mill. Tucker and Priestley were intermediaries in that they popularized the general argument, and Newton supplied a simile that for Hartley no doubt had a deeper import. So the line of descent of J. S. Mill's psychology is approximately as given in Chart III.

Newton's theory of vibrations was used by Hartley in his "Observations on Man, His Frame, His Duty and His Expectations," 1748, to provide a materialistic setting for his view of sensations. What Locke had said earlier on sensations and ideas served to confirm Mill, especially after due regard for the later improvements of Hume and Jas. Mill. The scheme was simple enough, and well epitomized in J. S. Mill's classification of all mental facts under the heading: Sensations, Thoughts, Emotions, and Volitions.[44] From the first were derived the remainder. Impressions, through the senses, made possible ideas, both the simple and the complex, the latter being constructed out of the simple ones in the way that blocks produce a mosaic.[45] In Priestley's words: "The simple ideas of sensation run into clusters and combinations by association; and each of these will, at last, coalesce into one complex idea by the approach and commixture of the several compounding parts.[46] All of which Jas. Mill expressed in the sentence: "Brick is one complex idea; mortar is another complex idea; these ideas, with ideas of position and quantity, compose my idea of a wall."[47] (Behold the birth of concepts!)

The supreme mental laws then were memory and association, although the author of the "Logic" described

[44] Ibidem, ch. 4, § 1.
[45] For some reservations Mill makes on this point see ch. 4, § 3.
[46] Hartley's Theory of the Human Mind, edit. of 1790, vol. I, p. 18.
[47] Analysis of the Human Mind, edit. of 1869, vol. I, ch. 3.

them in different words.[48] Among the universal human traits that gave a solid basis to sociological ambitions were these two: Our faculty to remember, ideas being compounded and recompounded out of simpler ingredients, and the comprehensive law of association which governed not only ideas, but also feelings,[49] as Th. Brown had been the first to suspect. Thanks to such principles there arose uniformities of succession of "states of mind." [50] Ideas were the fountain of all social happenings. Regularities in history, as well as our hopes for a law of progress, had to be traced back to the aforesaid fundamentals. (Note then, incidentally, how far Mill, the friend of socialism and the master mind of classic economics, was from an Economic Interpretation of History in the manner of Karl Marx!)

Now, on the strength of such laws Mill sketched out an Ethology [51] that might yield laws of the formation of human character such as Hume had aspired to but had failed to locate. It was remarked even here that deduction must guide the inquirer, because of the multiplicity of data and the composition of causes constituting the warp and woof of these moral-psychological events.

However, what Mill is driving at is of course not merely this science of ethics, but rather a methodology for all social searchings, and for economics more especially. So we are told first that sociology springs from psychology,[52] and that, while the number of events to be related is virtually indeterminate, and certainly not reproducible at will,[53] yet the mode of causal relation is a mechanical

[48] Ch. 4, § 3.
[49] Ibidem.
[50] Ibidem, § 2.
[51] Ch. 5.
[52] Ch. 6, § 2, and ch. 10.
[53] Book III, ch. 10, § 8.

one, as mentioned before under the caption Composition of Causes.[54]

It is a cardinal point for our understanding of Mill's methodology, that he identified social causation with a law of the *composition* of causes, not with chemical interactions. What he had come to believe about 1830 he now reaffirms. He writes: "In social phenomena the Composition of Causes is the universal law." [55] . . . "*However complex the phenomena, all their sequences and coexistences result from the laws of the separate elements. The effect which is produced, in social phenomena, by any complex set of circumstances, amounts precisely to the sum of the effects of the circumstances taken singly: and the complexity does not arise from the number of the laws themselves, which is not remarkably great; but from the extraordinary number and variety of the data of elements. . . .*" [56]

Because of this fact Mill pronounces social science to be a field for *direct deduction*, adding merely: "not indeed after the model of geometry, but after that of the higher physical sciences. It [social science] infers the law of each effect from the laws of causation upon which that effect depends,—by considering all the causes which conjunctly influence the effect, and compounding their laws with one another." [57] This is the Concrete Deductive Method; and nothing short of stupidity would urge induction for this purpose. "The vulgar notion that the safe methods on political subjects are those of Baconian induction, that the true guide is not general reasoning, but specific experience, will one day be quoted as among

[54] Ibidem, ch. 7, § 1.
[55] Book VI. ch. 7, § 1.
[56] Ch. 9, § 1.
[57] Ibidem.

the most unequivocal marks of a low state of the speculative faculties in any age in which it is accredited." [58]

Only two admissions are granted by way of amplification. Namely, the *premises* of social science will have to be established chiefly inductively,[59] albeit thereafter everything is deduction; and secondly, on account of the Intermixture of Effects the student of economics cannot expect to formulate rigid laws by precise measurements. No, he can deal only with tendencies or averages,[60] though this is not detracting from the merit of his work, or from the potency of economic principles. At any *given* moment, that is to say from a static standpoint, events will shape themselves in obedience to the laws of mind and of the composition of causes. Long-run effects will be ascertained beyond cavil. Though relative to place and periods, social laws will have wide prevalence. Deduction will cover all needs provided we do not attribute every situation or sequence to a single motive as Bentham demanded to suit his hedonistic program. With a sidelong glance of scorn at this Benthamite "geometrical" method [61] Mill continued his argument, clinching it with two points that, although not vital, deserve mention by way of closing our account.

In the first place Mill came under the influence of A. Comte, as has been shown by a host of investigators from various angles. To Mill's thinking Comte contributed the historical viewpoint. This Mill had heretofore not reckoned with, or at any rate not sufficiently considered in his methodology. It must have been a perturbing item, since economics so far had adhered

[58] Book III, ch. 10, § 8.
[59] Book VI, ch. 4.
[60] Ch. 9, § 1.
[61] Ch. 8.

rigidly to a static view, excepting only some heterodox, practically unknown, writings of a collectivistic hue.

How was Mill to find use for this vista that revealed mankind as a troop traveling at slow gait over long distances of time, changing its route, inconstant in its professions of faith, and harassed more by its own institutional creations than by obstacles of nature?

Whatever Comte's shortcomings as a logician and metaphysician, it was plain to Mill that another avenue of approach to social valuations had been opened, and that the simplicity of Humian psychology had to be supplemented by studies for which deduction could not serve. Comte alone, we are told, "has seen the necessity of thus connecting all our generalizations from history with the laws of human nature; and he alone therefore has arrived at any results truly scientific. . . ." [62] A method ancillary to the deductive is consequently in order; and "this method, which is now generally adopted by the most advanced thinkers on the continent, and especially in France, consists in attempting, by a study and analysis of the general facts of history, to discover . . . the law of progress. . . ." [63] Given certain laws of mind and of behavior, what has history to say by way of corroboration or refutation, this is the question. Deduction and induction will work together to supply the answer. An Inverse Deductive Method thus results, and sociology becomes a philosophy of history that discloses the "empirical laws of society," connecting them "with the laws of human nature by deductions showing that such were the derivative laws naturally to be expected as the consequences of those ultimate laws." [64]

Whether this is a successful manner of linking statics

[62] Ch. 10, § 3.
[63] Ibidem.
[64] Ibidem, § 4.

and dynamics need not now engross us, but assuredly its effect upon Mill's "Principles of Political Economy" were not negligible.[65] On the other hand, it is equally certain that the second of the two qualifications of the deductive method urged by Mill follows much more naturally from his conception of mental phenomena; to-wit, Mill's emphasis upon economics as a separate science, basing deduction on a relatively small number of elements of human nature, which as premises must either be accepted or render null and void all subsequent conclusions.[66]

Different social facts were acknowledged to spring from different classes of causes that could be treated separately precisely because of the laws of memory and of association. For the economic motives were so all-powerful, and the transfer of desire from ends to means essential to their realization was so incontestable, that economics attained thereby a distinct significance, not to say scope and subject matter. "Different species of social facts are in the main dependent, immediately and in the first resort, upon different kinds of causes; and therefore not only may with advantage, but must be studied apart. . . ."[67] Thus by reasoning from one law of nature "a science is constructed which has received the name of political economy."[68] . . . "It makes entire abstraction of every other human passion or motive except those which may be regarded as perpetually antagonizing principles to the desire of wealth, namely aversion to labor and desire of the present enjoyment of costly indulgences."[69] . . . "The political economist inquires what are the actions which would be produced by this desire, if within the departments in question

[65] Book IV is the by-product of this study of Comte.
[66] Ch. 4 of Logic.
[67] Ch. 9, § 3.
[68] Ibidem.
[69] Ibidem.

it were unimpeded by any other. In this way a nearer approximation is obtained, than would otherwise be practicable, to the real order of human affairs in those departments." [70] Owing to the fact that "the mode of production of all social phenomena is one great case of Intermixture of Laws" [71] economic laws will then represent long-run tendencies.

With this understanding the economist may lay claim to scientific formulæ no less than a physicist. Indeed—and casually speaking—he need not even insist upon the egotistic presuppositions which seem to inhere in his premises, for as stated earlier: Desire will reach also for things non-economic, owing to the law of transfer of interest by association. Or in the words of Mill: "It is at least certain that we gradually, through the influence of association, come to desire the means without thinking of the end. . . . As we proceed in the formation of habits, and become accustomed to *will* a particular act or a particular course of conduct because it is pleasurable, we at last continue to will it whether it is pleasurable or not." [72] For this reason regularity of conduct is possible and economic analysis made less risky, while on the other hand habit or custom loom up as interferences with the rational play of demand and supply.

Mill, it will be seen, labored cautiously in constructing his logic of economics.[73] He went step by step from premises to conclusions, and to further conclusions, interlacing his argument at points with enough shrewd and convincing observations from common experience to be sure of a sympathetic hearing. Logically viewed his

[70] Ibidem.
[71] Ibidem, § 2.
[72] Ch. 2, § 4.
[73] For an illuminating discussion of the genesis of Mill's Logic see Patten, S. N., in his Development of English Thought, 1899, in which emphasis is put, however, on somewhat different points. See especially pages 324-335.

treatise is the prerequisite, whether frankly espoused or not, of all Utilitarian and Marginal economics. By some the superlative value of the "Logic" was overlooked. Others prefaced their economics with thoughts along similar lines, though much more perfunctorily, and a few were doubtless aware of everything implied in this mighty essay on social methodology. From the historical standpoint Mill furnished a climax almost too grand to be fully understood, while to philosophers the best is of course not in Book Six of the "Logic," but in the Canons of Induction upon which Mill staked his reputation as logician. At all events, Mill alone succeeded in framing a sequence of thought that justified everything committed or omitted by orthodox economists.

This giant, who encompassed the knowledge of his day as few ever have, also conquered unassisted the difficulties that Hume had once before perceived, that economists of the nineteenth were bound to respect, and which the twentieth century may perhaps again scrutinize, if not to solve them anew, certainly to appreciate what they mean for the future of economics.

CHAPTER FIVE

UTILITARIANISM (Continued)

II. Principles

The Supremacy of Mill's Logic.—On the foundations laid by the Benthamists, and by John Stuart Mill in his several philosophical and economic works, economics grew into a full-fledged science, functioning independently of other social inquiries and for a long time undisturbed by any protests from outside. Nothing particularly new was added in matters of psychology or methodology. At times the premises were restated and amplifications offered that helped to remind economists of the broader aspects of their discipline; but none of these discussions exerted any marked influence. In the United States H. C. Carey was the first to unite with a general knowledge of natural science a deep interest in philosophy, as well as originality in the treatment of economic problems. No American of the nineteenth century can claim more justly our high regard for labors well done than this zealous champion of monism. Scattered through his many volumes we find ideas on metaphysics, psychology, mathematics, physics and chemistry, biology and anatomy, ethics and logic, sociology and history, in the light of which his economic views should be read if we wish to comprehend him thoroughly. What Comte was to France and J. S. Mill to England, Carey in a way meant to America. He did not despise methodology even though

he dealt with it perfunctorily. Like Smith he learned much from his own peculiar environment, but there was something to start with that was independent of surroundings, nay even perhaps at variance with them.

In France and Germany economics underwent material changes which will soon have to be noted, but so far as the groundwork of its orthodox literature is concerned it was either of English design, or else hardly in evidence. Only after the rise of the German Empire do we find the methodological introductions which have since become so familiar, and then they are devoid of distinct merits. What the Germans added on this topic belongs either to Historism or to Marginism. For the rest, the developments pertain to principles, and not to premises.

Neither can anything more complimentary be said of French or Italian economics, until we reach the period of Marginism. Indeed, in England, too, Mill occupies a unique position, since no student of economic methodology ever approached the profundity of his own analysis or the thoroughness of his treatment. Characteristic enough that neither Malthus nor Ricardo nor Senior concerned themselves seriously with the presuppositions of their science, and that later writers either restated the bulk of Mill's argument—in so far as the problem was appreciated at all—or else took to the Historical viewpoint, whose logic certainly was not that of the Utilitarians! Bagehot has secured for himself an honorable place in the field, but did not complete his investigations. Henry Sidgwick, like Fawcett and Cairnes, gave prestige to the theory of economics, but apparently used his originality chiefly for the "Methods of Ethics," Utilitarianism as mere ethics being weighed again and found wanting. Macleod adds nothing new, nor can it be said of Cairnes' "Character and Logical Method of Political Economy"

that an advance was made over the position of J. S. Mill. In fact, from the very nature of those lectures we might perhaps expect them to be general and fragmentary rather than exhaustive. Still later comes Marshall and Keynes, whose "Scope and Method of Political Economy," 1891, went more carefully into methodological questions than any work except Mill's. Yet in both these cases our admiration will be mingled with regret, for again the new is either lacking entirely, as in Marshall, or it relates simply to such discussions as had been raised by Historism and settled there with even greater success. Broadly speaking then Mill's "Logic" has neither peer nor successor in point of development within Utilitarian economics. Progress was made in details of doctrine, i. e., principles, but not in matters of logic where the premises were most naturally put to a test.

The Field of Economics.—Turning now to these leading principles which directly or indirectly were based on the premises so far considered.

To begin with, Utilitarian economics almost from the start restricted its investigations to the facts of exchange, i. e., monetary measurements. The psychology and logic used did not, in fact, leave any choice, though inconsistently an objection was raised by some writers. Mill had shown why economic motives might be set aside as raw material for a new science of which Adam Smith was not altogether certain. The Benthamites had spread the gospel of hedonism as a key to production and pricing. Price was already understood to represent a ratio of exchange without which neither income could be explained nor the identity of physical and social laws of nature be adequately proven. If Mill was right, clearly economics was a science of exchanges; and so Archbishop Whately declared ere long.

The agreement was pretty general, as may be judged from a few quotations. Jennings, e. g., who is anything but a docile mouthpiece for other people's opinion, admits that economics deals simply with "relations of human nature and exchangeable objects. . . ." [1] McCulloch, J. R., in his "Principles of Political Economy," 1825, writes: "Nothing which is not possessed of exchangeable value, or which will not be received as an equivalent for something else which it has taken some labor to produce or obtain can ever properly be brought within the scope of political economy." [2] Similarly Cairnes in his "Logical Method," [3] cited before, and the continental writers including some with a penchant for historical interpretations. Wagner, for instance, defines economy (Wirtschaft) as the "study of labor-activities aiming at a continuous supply and use of goods for consumption, these activities proceeding methodically to that end within a *closed* or at any rate *hypothetically closed* field of human wants and gratifications." [4] So also French economists when not avowedly solidaristic in their outlook. Or if we care, we can go back to Ricardo's "Principles of Political Economy," to Senior and Torrens and Jas. Mill, or consider the indirect evidence in treatises emphasizing price and income. J. S. Mill himself says in his "Principles," 1848: "Things for which nothing could be obtained in exchange, however useful or necessary they may be, are not wealth in the sense in which the term is used in Political Economy." [5]

Specific Premises.—In keeping with this sentiment was

[1] Jennings, R. The Natural Elements of Political Economy, p. 63.
[2] Pages 10-17.
[3] Page 26. See also pp. 34-37.
[4] Lehr- und Handbuch der Politischen Ökonomie, vol. 1; Grundlegung der Volkswirtschaft, 3. edit., 1892, p. 81. See also Schoenberg, G., Handbuch der Politischen Ökonomie, edit. of 1890, vol. 1, p. 9.
[5] Page 24. See also Leroy Beaulieu, P., Traité Théoretique et Pratique d'Economie Politique, 4. edit., vol. 1, p. 18.

the assumption by the great majority of writers of certain facts, legal or psychological in a narrower sense, the denial of which would invalidate the various doctrines on price, distribution, and production. The two sets of premises were commonly kept together, even though logically it had no warrant. Thus, while Smith had gone out of his way to justify Laissez Faire, using psychology and theology for that purpose, the trend of legislation was such that, as most men saw it, the unrestricted right of property and contract needed no mention, while with others nothing seemed less self-evident than the free-trade axiom derived from it. Senior, for instance, thought the legal rights "assumed in almost every process of economic reasoning" as a "cornerstone of . . . exchange";[6] but Cairnes in his "Essays on Political Economy," 1873, declared: "The maxim of Laissez Faire has no scientific basis whatever, but is at best a mere handy rule of practice useful perhaps,—but totally destitute of all scientific authority."[7] In the face of such an utterance, even allowing for the occasion on which it was made, it would be over-dogmatic to declare the hedonistic and legal premises developed during the end of the eighteenth century as inseparable and interdependent, and yet, in spite of the growing resort to central governments for the regulation of economic affairs, there can be no doubt of the logical importance of both kinds of suppositions.

Indeed, it was never lost sight of entirely by those most consistent in their thinking. Even when not prone to theorizing on methods, economists made it their business to remind us, from time to time, of what was basic to their argument. Thus to illustrate from only a few

[6] Political Economy, Introduction.
[7] Essays in Political Economy, 1873, p. 244.

authorities: Senior in his article contributed to the Encyclopedia Metropolitana, 1836, considered the "elementary propositions" on which his science rested to be, first, the desire for maximum wealth to be procured by a minimum of sacrifice; second, a population limited only by moral or physical evils, or by the fear of a want of necessities; third, the ability of the agents of production to increase their powers indefinitely by using their products for further production; and fourth, the law of diminishing returns in agriculture. John Stuart Mill expressed himself with sufficient clearness on the matter both in his "Principles," where older ideas are sometimes restated, and in his "Logic," whose general argument has already been presented. But perhaps one might add here this one sentence: "The psychological law mainly concerned [in economics] is the familiar one that a greater gain is preferred to a smaller one." . . . "By reasoning from that one law of human nature . . . a science may be constructed which has received the name of political economy." [8]

Cairnes believed that "our premises in economics come either directly from our consciousness or from physical facts easily ascertainable." [9] He mentioned the desire for wealth, the aversion to labor, the principle of maximum gain at minimum cost, a rational mind fit to judge upon the proper relation of means to ends, a few propensities basic to any law of population, physical qualities of the soil, and other physical factors as leading examples of economic premises.[10] That is, they appeared to be partly logical devices, and partly data that might figure as conclusions after an investigation of the respective facts had been completed.

[8] Logic, Book III, ch. 9, § 3.
[9] Character and Logical Method of Political Economy, p. 220.
[10] Ibidem, pp. 33-4.

In the United States Francis Bowen, the author of "Principles of Political Economy," 1859, whose readable style and broad sympathies with practical questions gave him a good name, expressed the view: "Political economy begins with the supposition that man is disposed to accumulate wealth beyond what is necessary for the immediate gratification of his wants, and that this disposition, in the great majority of cases, is unbounded; that man's inclination to labor is mainly controlled by this desire; and that he is constantly competing with his fellows in this attempt to gain wealth; and that he is sagacious enough to see what branches of industry are most profitable, and eager enough to engage in them, so that competition regularly tends to bring wages, profits, and prices to a level." [11] A similar, but more concise, statement came from Newcomb in 1885, at the beginning of his "Principles of Political Economy," a work of unusual merit indeed. We are told there that the fundamental hypotheses were: "That man is a being moved to action by an unlimited series of desires; that these desires can be partially satisfied by the exertion of those faculties bodily and mental, with which the Creator has endowed him; that he is a reasonable being capable of adapting means to ends; and that in consequence of being a reasonable being he will exert his faculties in such a way as to secure the maximum gratification of desires with the minimum of inconvenience under the circumstances in which he is actually placed." [12]

For Cossa, the Italian economist, the premises were first, the principle of greatest gain for the smallest cost; secondly, the law of diminishing returns; third, the

[11] Page 8.
[12] Page 23.

Malthusian law, and fourth, competition based on private property and freedom of contract.[13]

Among the Germans Wagner wrote in his "Principles of Political Economy," 1892, that everything hinged on the principles of maximum gain and minimum cost, of equal technical or other knowledge pertaining to the supply and demand of goods, and on a certain distribution of legal rights for using our instincts and reason.[14] Dietzel, his collaborator in the companion volume on "Theoretical Social Economics," 1892, conceded that economics could not be a science if certain premises were removed, and forthwith grouped them under two headings, viz., the first as psychological in their nature, the maxim of an "economic man," of least cost, and of equal knowledge about the facts of the markets being instances; and secondly, those sociological in nature, the choice between a collectivistic or an individualistic order of society standing out as all-important. His second class of premises therefore became admittedly mere working devices, ceased to be what they had been for the older Utilitarians, and indicated interestingly the Historical leaning which motivated so many Socialists of the Chair.[15]

The tentative value of premises, lastly, was also recognized by philosophers who as logicians had a peculiar interest in them. And so it will not be amiss to cite Wundt whose "Logic" dealt *passim* with necessary assumptions. They were held to be: Maximum consumption, respectively, production as the highest aim of men; equal understanding among men of what was best for them, or at least of the means for gratification; and free-trade "in the absence of economic privileges." [16] Con-

[13] Cossa, L. Introduction to the Study of Political Economy (transl. from the Italian by Dyer, L., 1893), pp. 74-5.
[14] Lehr- und Handbuch, vol. I, 3. edit., pp. 175-85.
[15] Theoretische Sozialökonomik, 1895, pp. 78-92.
[16] Logik, 2. edit., vol. 2, p. 509.

sidering the reputation of the author, and the place of this statement (namely after many pages on the methodology of social science and more particularly of economics), it is not without significance.

The need of premises was recognized the more clearly, the deeper men's comprehension of the rigid deductive method into which economics had fallen after 1800. The abstractions of Fichte in his "Closed Commercial State" of 1800, of Ricardo in 1817, of Thuenen in his "Isolated State," 1826, of Cournot in his "Researches into the Mathematical Principles of the Theory of Wealth," 1838, and of Gossen, whose "Development of the Laws of (Human) Commerce," 1855, marks an epoch in economic thought . . . these bold attempts at attaining precision were bound to arouse interest in suitable axioms. Utilitarian economics in this respect not only began a task, but also completed it. If freedom of vocation and of residence have recently been added as parts of the general assumption, this is of no great import. The act of commitment lay in the acknowledgment of human traits and of socially evolved liberties for individual initiative, without which political economy might be a business or an art, but not a science delving for laws of relations.

Structural Characteristics.—Yet, that inconsistencies abounded and the classification of data was by no means the same for all students of the subject, may be seen at a glance from Table Two. Structurally economics owes a great deal to J. B. Say, whose work was discussed previously, and to K. H. Rau. It was not likely that economists thereafter should be as indifferent to logical divisions as Smith had been. Ricardo on his part had provided a viewpoint for a treatment of economic facts coming near to the procedure of mathematicians. For as

TABLE TWO

ORDER OF TREATMENT OF MAIN SUBJECTS IN REPRESENTATIVE TREATISES ON ECONOMICS SINCE 1776

Author—and Short Title of Work	Date	Scope and Method	Production	Consumption	Price (Value)	Distribution	Applied Economics: Miscellaneous	Applied Economics: P. Finance	Applied Economics: Exchange	Applied Economics: Econ. Hist.	Remarks
1. Smith, Wealth of Nations	1776	..	1 (3a)	..	2	3	..	5	..	4	
2. Ricardo, Principles of Political Economy	1817	..	..	..	1	2	..	3	4	..	
3. Raymond, Elements of Political Economy	1820	..	2	5	1	3	6	7	4	..	
4. Chalmers, Political Economy	1821	..	1	..	..	..	..	3	2	..	
5. Malthus, Principles of Political Economy	1821	1	4	..	2	3	..	..	..	..	
6. Torrens, Production of Wealth	1821	..	2	..	1	..	3	..	4	..	
7. Rau, Elements of Political Economy	1826	1	3, 6	..	2	4	7	8	5	..	
8. McCulloch, Principles of Political Economy	1828	..	1	4	2	3	..	..	..	..	
9. Say, Complete Course of Political Economy	1828	1	2	8	3	6	2a, 5, 7	9	4	..	
10. Senior, Political Economy	1836	1	3	..	2	4	..	..	..	..	
11. Mill, Principles of Political Economy	1848	..	1	..	3	2	..	5	4	..	
12. Bastiat, Economic Harmonies	1850	6	3	1	4	5	..	..	2	..	
13. Carey, Principles of Social Science	1858	1	8, 10	..	3	9	2, 6, 11	..	5, 12	4, 7	
14. Courcelle-Seneuil, Theoretical Treatise on Political Economy	1858	1	2	3	4	5	6		7	8	
15. Cairnes, Leading Principles of Political Economy	1874	..	..	..	1	2	..	..	3	..	
16. Cauwes, Political Economy	1878	1	2	4	3	7	5, 6a	8	6	..	
17. Schoenberg, Manual of Political Economy	1882	1	2	6	3	5	7, 8	9	4	..	
18. Sidgwick, Principles of Political Economy	1883	1	2	..	3	4	5	..	..	..	

19.	Walker, Political Economy	1883	1	2	6	3	5	7	..	4	..
20.	Newcomb, Principles of Political Economy	1885	1	2	..	4	5	7	..	3, 6	..
21.	Pantaleoni, Pure Economics	1889	..	..	..	1	2	..	..	..	..
22.	Wagner, Principles of Political Economy	1892	1	3	..	2	4	..	..	..	..
23.	Leroy Beaulieu, Treatise on Political Economy	1893	1	2	6	4	3	7	..	5	..
24.	Nicholson, Principles of Political Economy	1893	1	2	..	4	3	7	6	5	..
25.	Gide, Principles of Political Economy	1904	1	3	6	4	5	3a	..	3	..
26.	Colson, Course of Political Economy	1905	1	2	5	3	4	6	7	..	..
27.	Pareto, Manual of Political Economy	1906	1	3	2a	2	4	5	..	..	..
28.	Blanchard, Course of Political Economy	1909	1	2	3	5	4	..	7	6	..
29.	Taussig, Principles of Political Economy	1911	..	1	..	2	5	4, 6, 7	8	..	..
30.	Sismondi, New Principles of Political Economy	1819	1	2	..	..	..	4	..	3	..
31.	List, National System of Political Economy	1841	..	2	..	..	..	3	..	..	1
32.	Roscher, System of Political Economy	1854	1	2	5	3	4	6	7	..	..
33.	Schaeffle, Social System of Economics	1860	1	2	5	3	4	..	..	..	..
34.	Schmoller, Outlines of Political Economy	1900	..	2	..	3	6	5, 7	..	4	..
35.	Walras, Elements of Political Economy	1874	1	3	..	2	4	5	..	..	..
36.	Marshall, Principles of Economics	1890	2	4	3a	3, 5	6	..	..	..	1
37.	Philippovich, Outlines of Political Economy	1893	1	2	6	3	5	7, 8	..	4, 9	..
38.	Flux, Economic Principles	1904	1	..	..	2	3	5	6	4	..
39.	Seager, Principles of Economics	1904	2	5	3	4	6	8	9	7	1
40.	Johnson, Introduction to Economics	1909	1	3	..	2	4	5a	..	..	5
41.	Fisher, Principles of Economics	1912	..	1	..	2	3	..	..	..	..
42.	Fetter, Economic Principles	1915-16	..	3	..	1	2	5, 7	6	4	..
43.	Clay, Economics for General Reader	1916	1	2	..	4	5	6	..	3	..
44.	Ely, Outlines of Economics	1916 ((1900)	1	3	4	5	7	8	9	6	2

{Human Nature, 1

Note One: Dates here given are those of first edition, though a later one has sometimes been used.

Note Two: The figures refer to order of *subject-matter* in cases where Value (Price) in treatises is discussed under the heading "Exchange."

soon as economics was definitely understood as a study of principles of pricing and distribution, the case of production being one of values and not one of volume, a certain sequence of arguments would suggest itself. In most instances this appears from the treatises tabulated. But the agreement assuredly is much less than one might have expected, the cause being not merely the nature of the material which left much room for individual stress and strictures, but also the confusion of competitive with non-competitive concepts, as a result of which main divisions changed order, or special minor topics slipped into places where logic could not have defended it. Thus, even among Utilitarians as distinct from the Marginists, there was little agreement as to the relative position of Production and Price, not quite three-fourths preferring this order, while the rest reversed it in perfectly good faith. J. S. Mill characteristically begins with Production, then takes up Distribution, and then Exchange, this latter containing his views on value and price, while Consumption is held not to form part of economics. Ricardo of course had no direct interest in production or consumption, partly because he was guided by his criticism of Smith, and partly, no doubt, because of his general outlook. As will appear in a moment the definitions and laws derived largely from them prompted the Utilitarians to arrange their material differently from what they might have done had they clung steadfastly to their psychological theories. And this is perhaps the reason too why Consumption was treated so step-sisterly, driven from pillar to post, now called by one name and now by another, proving for some an invaluable aid in straightening out their affairs, but for others merely an inconvenient claimant whose real status could not be defined owing to irreconcilable viewpoints and aims.

So the outward form of both Marginal and Utilitarian economics varied considerably. Exchange dealt with many matters pertaining neither to production nor to pricing. Production now had one caption, now two. Distribution depended on laws not operative in Production, yet was often wrenched from Value or Exchange where prices of services no less than those of commodities were supposed to be explained. The question was: How could uniformity be introduced without reducing economics to a description of one single régime of perhaps purely national significance? [17]

Economics and Ethics.—The situation was complicated by the fact that some Utilitarians considered ethics an integral part of their work and therefore offered advice to governments in the belief that their science could not go wrong. From the start this relation of the Is to the Ought had figured in economic discussion. The Physiocrats like Smith had pointed to certain corollaries as suitable means for new policies and the reconstruction of society. Their conclusions were taken seriously and tried out practically because the age was ready for a change. The abstract question as to how science can become politics, or a moral ideal spring logically from a description of economic processes, was not yet formulated; nor could it have vexed people who talked continually of a law of nature which itself prescribed the steps men should take to prosper.

From the Utilitarian standpoint, however, the answer might be given in two different ways. Namely, it might appear as if, since pleasure was virtue and happiness at the same time, a moral issue was altogether impossible,

[17] On the early history of structural features in economics see, e. g., Cannan, E. A History of Theories of Production and Distribution; or Cossa, E. Del Consumo delle Richezze, 1898.

the real difficulty being merely the discovery of the cheapest means by which each could get his pleasure so that the "greatest happiness of the greatest number" was achieved. Or on the other hand, followers of the Utilitarian economics who accepted its psychology and general method, as laid down notably by J. S. Mill, might nonetheless espouse a non-utilitarian ethics that had nothing to do with economics. Furthermore, a question might of course be raised as to the exact meaning of the phrase by which the science was designated; in which case the dissension among economists need not arise from any particular notion of ethics, but rather from a desire to state the case of art versus science. What was "political economy," a science only or also an art? Or should applications of the science pass under a different title, supposing they were logically admissable?

In a word, the Utilitarians were the first—though by no means the last!—to wrestle with the terms science, art, and ethics. Some were out and out hedonists and saw in morality no more than a convenient term for justifying an individualistic standpoint. Others never shared Bentham's opinion, but on the contrary preached a theory of ethics either in the style of eighteenth century intuitionists, or in accord with the transcendental viewpoint which after 1830 gained an appreciable following even in England. And as for the continental economists it goes without saying that they never presumed to base their ethics on a pain-pleasure calculus. Rationalism precluded such a step in the earlier days, and later on the Kantian category, in one way or another, fastened itself upon the great majority of writers. This is shown not only by flowing passages on the high mission of economics as a discipline true to the best dictates of ethics—

as if social science needed this support—but also by the opposition of the Historical group, for one thing, to Smithianism or Ricardianism, and for another thing, to any injection of moral issues into economics proper. Indeed, going over the economic literature one cannot help but be impressed with the gradual ascendancy of the non-ethical economics, that is of the belief in economics as a science not simply distinct from ethics, but in its conclusions probably incompatible with any theory of ethics!

Among those who did not clearly decide between political economy as an art and as a science we must place Smith in spite of his break with the old conception of "Moral Philosophy," but also some who were not of his age, yet wished economics to have a practical, semi-moral mission. Dugald Stewart, for instance, in his "Lectures on Political Economy" (probably penned between 1790 and 1805) defined political economy as "those speculations which have for their object the happiness and improvement of political society, or in other words, which have for their object the great and ultimate ends from which political regulations derive all their value. . . ." [18] The "prevailing springs of human action" are to serve as a guide in this endeavor, and Population, Wealth, including Trade and Taxes, Pauperism, and Education of the Lower Orders figure as the main divisions of his survey. Bentham, in his "Manual of Political Economy," 1793, declared: "Political Economy is at once a science and an art." [19] Non-interference was to be the general principle, as was shown particularly in his "Defence of Usury," 1787. Yet there were cases where "Agenda" seemed advisable, or at any rate excusable, and some of

[18] Collected Works, 1802, Introduction, and vols. 8 and 9.
[19] Opening sentence of Manual.

these were mentioned as means toward the attainment of happiness for the greatest number.[20] Ethics could not form a *distinct* subject for the examination of economists, since on his hedonistic premise the good and the valuable for exchange coincided completely.

Chalmers, whose "On Political Economy in Connection with the Moral State and Moral Prospects," 1832, had a special mission aside from influencing the younger Mill, wrote in his Preface: "Political Economy aims at the diffusion of sufficiency and comfort throughout the mass of the population by a multiplication or enlargement of the outward means and materials of human enjoyment," [21] religious education becoming important for this reason. McCulloch thought that economics included necessarily a "discussion of the means whereby labor may be rendered most efficient, or whereby the greatest amount of necessary, useful, and desirable product may be obtained with the least possible quantity of labor," [22] an opinion that endowed with virtue what ordinarily passed as plain greed.

If we turn to France and Germany we shall find the friends of an independent, non-utilitarian ethics laboring for a reconciliation of the Is and the Ought in social life. J. B. Say, of course, had set a precedent by his categorical exclusion of morals from economy, but many later writers, even when acknowledging the superiority of Say's presentation, preferred to be illogical rather than unethical. Thus Bastiat, Baudrillart,[23] and Cauwes [24] betray a strong undercurrent of moralism; while in

[20] Manual, ch. 1.
[21] Pages iii-v.
[22] Principles of Political Economy, Part II, § 1. See also Scrope, G. P. Principles of Political Economy, 1833, p. 35.
[23] Baudrillart, M. H. Des Rapports de la Morale et de l'Economie Politique, 1860.
[24] Cours d'Economie Politique, 3. edit., 1893, vol. 1, pp. 8-12. See also Block, M. Les Progrès de la Science Économique, 1890, vol. 1, p. 35.

Germany the Socialists of the Chair felt constrained perhaps as much by circumstances as by theoretical aims to wed economics to ethics. Wagner himself, as editor of the encyclopedic "Manual," exerted considerable influence in this direction, not only in Germany, but elsewhere.[25] Thus it is not at all strange that one should read in Schoenberg's "Manual": Economics does not primarily ask "whether the greatest possible amount of wealth is produced, but rather how men live, how far through their economic activity the moral aims of life are fulfilled, and how far the demands of justice, humanity, and morality are satisfied."[26] The Historical movement had tended toward such a confession on the part of Utilitarian economists. It appeared commendable to fuse ethics with economics, even if Ricardianism was otherwise retained and the metaphysical nature of moral questions granted out of hand.

However, at its best and in its purest form Utilitarian economics was stripped of moral valuations. The conscious and common aim of students was to separate the Ought from the Is, in the hope that economics might thus gain in scientific tone. Malthus in his "Principles of Political Economy," for instance, protested against moralizing even though "the science of political economy is essentially practical, and applicable to the common business of human life."[27] Senior in his article on "Political Economy," 1836, balanced the in- and ex-clusion of moral issues rather cautiously, not to say with indecision, but perhaps one should take most seriously his evident predilection for rigid thinking and abstraction. Thus he wrote: "The questions, To what extent and

[25] Lehr- und Handbuch, edit. of 1892, vol. 1, pp. 144-45.
[26] Handbuch, edit. of 1890, vol. 1, § 9. See also Cohn, G. Grundlegung der Nationalökonomie, 1885, vol. 1, pp. 74-77.
[27] Edition of 1821, p. 9.

under what circumstances the possession of wealth is, on the whole, beneficial or injurious to its possessor, or to . . . society? And what are the means by which any given country can facilitate such a distribution? . . . all these are questions of great interest and difficulty, but no more form part of the science of Political Economy in the sense in which we use that term, than Navigation forms part of the Science of Astronomy." [28]

In a similar vein spoke Whately,[29] James and J. S. Mill, Donisthorpe, Cairnes, Bagehot, and Keynes. To quote only a few words from Donisthorpe, a writer less widely known than the others in spite of his attempt at an exact science: Plutology cares nothing "for the practical rules which may be deduced from its doctrines . . . ; still less for the mode in which wealth is [that is, ought to be] distributed amongst its proprietors." "Plutology investigates the laws of value. That is all." [30] Thus he differed from Hearn whose work he otherwise deeply admired.

In France the non-ethical attitude is represented by such different thinkers as Cournot,[31] Courcelle-Seneuil,[32] Cherbuliez [33] (a Swiss), and much later Colson, the author of the "Course of Political Economy," 1901–.[34] As in Germany, so here the practical value for the statesmen of many economic theorems is recognized, but without any willingness to identify statesmanship with ethics! The belief in a science of economics was stronger than the interest in the foundations of moral judgments. An un-

[28] Introduction.
[29] Lecture on Political Economy, 1831, p. 50.
[30] Principles of Plutology, 1876, pp. 2-3; a work influenced by Hearn, W. E., the author of Plutology, 1864.
[31] Researches into the Mathematical Principles of the Theory of Wealth, 1838, translated by Bacon, N. Y., 1897, p. 16.
[32] Traité Théoretique et Pratique d'Economie Politique, 1858, vol. 1, p. 8.
[33] Précis de la Science Economique, 1862, vol. 1, pp. 6-7.
[34] Cours d'Economie Politique, 2. edit., Book I, ch. 1.

equivocal separation of the two fields of study seemed most natural or least fraught with disagreeable consequences for economics. This view was of long standing and widely prevalent. We find it in the United States, too, where a number of scholars gave currency to European economic thought. F. A. Walker, whose "Political Economy," 1887, is a milestone in the development of American economics, may be quoted as representative of other men, though it would be wrong to suppose that the a-moral view won the day easily. Quite the contrary is true. We read: "The economist as such has nothing to do with the question whether existing institutions or laws or customs are right or wrong." . . . "The writer on ethics who deems the greatest good of the greatest number the ultimate rule of right may indeed make excursions into economics, in order to judge of the moral quality of an act or a system, by its effects on the production and distribution of wealth; but the economist on his part has no occasion to cross the boundary line." [35] In general, economists held this position the more outspokenly, the more logical their reasoning from the premises given, the more determined their effort to build on the definitions fundamental to their science.

Definitions.—Definitions and laws were laid down more or less exactly soon after Smith had published his "Wealth of Nations," but it was particularly the psychology and methodology of Utilitarian economics that brought a high degree of precision and agreement into the principal works of the time. A nomenclature developed which still constitutes part of the economist's working apparatus. Premises were carefully consulted in defining such fundamentals as utility, value, wealth, capital, production, consumption, labor, etc. The search

[35] Pages 26-7.

for principles, that is for constant relations between facts which should prove not merely the continuity from an anorganic to an organic world, but also furnish data for reformers and legislators, included studies in logic, implicitly or expressedly. Among all classes of thinkers the deductive method was favored either in practice or theoretically. J. S. Mill's procedure is representative of that of the great majority, even though they could not claim his mastery of the subject. What he himself had hoped from an inductively conducted examination into social processes was overlooked, but the route by which he sought a formulation of laws, to be valid for many nations and for long periods of time, led others to like conclusions. Dissent was rare at first. Only as a result of the steadily gaining long-time view of social institutions was the prestige of the Utilitarians dimmed, and then interest centered in two different problems, neither one of which had ever been given much thought.

For in Utilitarian economics the objective and static version was the only legitimate one. The world was taken to be real, and the usefulness of things as inherent in them, certain reservations notwithstanding. Utility was *of* matter as well as *for* men. Cost was outgo of materials and not primarily a pain, though the Benthamites knew of the latter. Income referred to goods and not to legal rights. Measurement was by a standard accessible to all, namely, by stuff or time, labor being back of both. In a word, though individualism had triumphed, there were echoes of the Physiocratic chant in praise of a beneficent nature and the perfectibility of Man.

The foundation rock of course was the concept of value, itself analyzable into the elements of utility, scarcity, and labor. Without labor, it had at the begin-

ning been preached, things could not acquire value, a view, however, which was gradually dispelled and replaced by the more logical one that what counts is not a physical change in external objects, but an attitude on the part of human beings. Scarcity therefore was found more decisive than energy previously spent, and this could mean nothing less than establishing a ratio between wants of people and the supplies on hand. That things useful would become the more valuable the less there was of them, was consequently understood at an early date, the comments of the Earl of Lauderdale on this subject being the prototype of most things said since. A paradox thus hove into view which it might take time to explain, but the reality of which none could deny. And as to this question of utility itself, the first step was a ruthless overriding of moral conceptions. In discussing values the problem of ultimate values was to be left out. It was nobody's business whether values satisfied theological or ethical norms or not. For the Utilitarians in the narrower sense economic and "higher" value was one; for others the stress was on a separation that should leave science untrammeled. Hence things were useful if they served to satisfy wants. The capacity of anything, whether tangible or not, to gratify any want whatsoever, was the proof of its being useful. As J. S. Mill observed in his "Principles of Political Economy," 1848: "Political Economy has nothing to do with the comparative estimation of different uses in the judgment of a philosopher or of a moralist. The use of a thing . . . means its capacity to satisfy a desire, or serve a purpose." [36]

Now, given utility and scarcity, or simply labor embodied in an object, or our right to exchange such objects, the definition of value is easy. Namely, it is

[36] Book III, ch. 1, § 2.

"the command which the possession of a thing gives over purchaseable commodities in general." [37] Value represents a relation between a person and something external to him, but it also expresses a relation between two or more articles measurable by the rate at which they are exchanged. Either one may serve as a unit for measurement. The customary one is a piece of currency, a standard legally defined, in which case we speak of money and price respectively. But it is not necessary that the exchange ratio be so reckoned. In barter the exchange is necessarily at a certain rate too; and here the value of the things exchanged is revealed. The market ratio increasingly received people's attention, the idea of a "natural" value being dropped as of no bearing on the main subject. Besides, there was an ethical element in the "natural" price that Utilitarianism could not approve of without jeopardizing its position.

However, it was granted that individual and social viewpoints might go far apart, and so from Lauderdale up to the present the definition of wealth has proven an apple of discord. For, strictly speaking, wealth had to be defined as "everything which has a power of purchasing"; but though this agreed well with the theory of an "economic man" and the delimitation of economics in utilitarian style, it occasioned much speculation as to the relation of national to individual wealth. The difference was soon noticed and courageously expounded. The Earl of Lauderdale once more set an example. John Rae in 1834 in America, and McCulloch and Torrens in England made much of the distinction, the hope being now to give economics a moral setting, now to accentuate the scien-

[37] Ibidem. See also Pantaleoni, M. Principles of Pure Economics (translated from the Italian by Bruce, T. B., 1898), ch. 4. For a classification of definitions of price see Fetter's article in *American Economic Review*, vol. II, 1912.

tific character of a discipline newly arisen. Indeed, the competitive concept gained the upper hand. Men like Say in France, Ricardo in England, and Hermann in Germany lent prestige to the terminology evolved from eighteenth century psychology and hedonism. The significance of *rights* was opposed to the older notion of *things* for use. Classes of wealth were enumerated and the differences between land and non-land wealth, or between producible and reproducible, or between durable and ephemeral, forms of wealth pointed out. But such facts, though significant for a national view of wealth, could not blind men to the entrepreneur background of their definitions.

The definition of capital changed also by degrees. At first it had meant "stock" in hand, that is, concrete things and notably foods for the laborer, the manufacturer being supposed to decide how much should be "saved" and how much put to personal uses. The "stock" was a circulating item. It was the surplus of the Physiocrats. The aim was to exhibit to the layman's glance the mechanism, the law of nature, by which all classes were fed and the cycle of production and consumption might go on forever if the surplus were properly handled—taxes included. Hence the terms circulating and fixed capital, Smith having defined the latter as stock "employed in the improvement of land, in the purchase of useful machines and instruments of trade, or in such-like things as yield a revenue or profit without changing masters, or circulating further." [38] Whether an article therefore changed hands or not in the course of business for profit was an important question to Smith. But from Ricardo on, while capital is more emphatically than ever a source of income irrespective of its form or lack of

[38] Wealth of Nations, Book II, ch. 1.

definite form, circulating capital consists of rapidly perishable items, while fixed capital referred to items not subject to quick deterioration or wear.[39] The problem of expenses as against labor-costs had driven Ricardo to this new distinction, and of course it was no obstacle to his main contention that capital was an individualistic concept. It was agreed that capital might or might not be the result of labor, or of savings, and that in one sense the matter was inconsequential so long as the destination of this surplus was understood. In other words, as the wages-fund controversy showed clearly, capital was pictured as a fund of values convertible at will into any number of things either for the use of personal servants or of day-laborers, or of farm-hands. But since either possibility had to be reckoned with the ratio of capital to laborers was important. Here therefore the collectivistic standpoint crossed the competitive, and thanks to the labors of Hermann, Rodbertus, and later on A. Wagner the rights-aspects became familiar to all.

Production and consumption too were defined both from the social and from the individual standpoint, although in harmony with the premises the latter tended to predominate. The original aim was of course the creation of utilities. It was granted from the start that man could not create matter, but only transform one kind into another for his particular purposes. The whole analysis of progress as the Naturalists offered it veered about this relation between man and materials. Even J. S. Mill opens his treatise with this sentence: "The requisites of production are two: labor and appropriate natural objects"; and he continues telling us about the differences between creating and converting things. So it is not to be wondered at that the physical aspects of

[39] Ricardo, D. Principles of Political Economy, ch. 1, § 4.

production should preoccupy the Utilitarians to the last. However, the possibility of "producing" without turning a hand, without ardent labors or the employment of large funds was impressed upon people more and more. It turned out ere long, as might have been predicted from the premises, that to produce is to render a service, and that the evidence for this latter act was price or appreciation itself, not the technique of production which to society at large is so fundamental. Production therefore ceased to be associated with the handling of concrete objects. Whether value took embodiment in tangibles or not, it was conceded that a productive act might have occurred.

Consumption.—But conversely it could not then be maintained that consumption necessarily involved a destruction of things, nor even that use is the sole test in the definition. Consumption, it soon appeared, might mean either use with or without either physical or value changes, or either one of the latter two without accompanying use. As to which was the surer method of finding out, not all could agree. In general, there arose two arguments, one emphasizing the *use* of goods, and the second the loss of *values* as the quintessence of consumption. The former suited the majority of economists, though even here dissension arose as to whether use had to result in physical or value change or not, in order to signify consumption. McCulloch in 1825 wrote: "Annihilation of those qualities which render commodities useful and desirable" [40] is the natural result of consumption. Senior expressed himself similarly,[41] and so D. Raymond, E. P. Smith, and F. Walker in America. Raymond, however, marred his argument by adding: "A service of plate

[40] Principles of Political Economy, 1825, Part IV.
[41] Political Economy, edit. of 1858, pp. 83-4.

may last for ages, although it is said to be consumed when purchased by him who designs to use it." [42] E. P. Smith, whose "Manual of Political Economy," 1853, shows the influence of H. C. Carey, wrote: "The consumption of a product is nothing else than its passage from a state of inertness to one of activity, as from the inorganic or mineral region to the vegetable or vital." This of course harmonized well with the sociological standpoint of his master, but for the Utilitarian system it had even less weight than F. Walker's definition of consumption as the "use made of wealth" which "does not necessarily imply the . . . exhaustion of the value which had at some time been imparted to" [43] such wealth.

And so one might cite also the German economists Hermann,[44] Schulze,[45] Schäffle,[46] Schoenberg,[47] etc. To them use was the decisive feature, not de-valuation. In one connection they contrasted demand and use with supply through production, in another they denied the shrinkage of supplies irrespective of withdrawals from the market. Schäffle was influenced by his sociological bias; some of the others by the Historical, i. e., collectivistic viewpoint. In France too writers like Cauwes,[48] Block,[49] Colson,[50] Blanchard,[51] Leroy Beaulieu,[52] and Gide [53] dwelt on use as the test for "consumption," use being sometimes identified with destruction physically, or of values, and then again not.

[42] Elements of Political Economy, edit. of 1836, vol. 1, pp. 118-20.
[43] Political Economy, edit. of 1887, pp. 292-93.
[44] Herrmann, F. B. W. Staatswirtschaftliche Untersuchungen, 1832, pp. 328-29.
[45] Schulze, F. G. National Ökonomie, 1856, p. 269.
[46] Das Gesellschaftliche System der Menschlichen Wirtschaft, 1873, § 4.
[47] Handbuch, vol. 1, pp. 685-86. See also Cohn, G. Grundlegung der Nationalökonomie, 1885, vol. 1, p. 212.
[48] Cours d'Economie Politique, vol. 1, p. 653.
[49] Les Progrès de la Science Economique, 1890, vol. 2, p. 486.
[50] Cours d'Economie Politique, vol. 1, p. 114.
[51] Cours d'Economie Politique, 1909, vol. 1, p. 307.
[52] Traité Théoretique et Pratique de l'Economie Politique, vol. 4, p. 200.
[53] Political Economy, translated and published by Heath (D. C.) & Co. from 3. French edition, Book 5, ch. 1.

As against this idea, however, we find thinkers like Say,[54] Boileau, Storch, Rau, Roscher prefer the competitive view, according to which one had "consumed" in losing values, be they socially measurable or not. Boileau in his "Introduction to Political Economy," 1809, tells us: "Consumption may be effected by nature, by individuals, or by society at large." . . . "To consume is to destroy the utility or the value of things." [55] Use then was an ordinary antecedent to consumption, but it could not be its sole cause. Rather it was a question of either incurring a loss of wealth individually conceived, or of not incurring it. In the former case there was consumption, in the latter not. The problem reminds one of the controversies about unproductive versus productive labor or use of wealth. What was used "productively," and what not? The disputants never grew tired of this—to us—falsely stated question: and yet it had to be admitted that in the first place it depended upon the point at which "economic" facts ceased to be "economic," and in the second place upon the definition of value. If the orthodox Utilitarian premises ruled, productiveness was a function of value-gains, whether these represented mere acquisition or effort resulting in tangible wealth. To say like Senior that unproductive consumption "occasions no ulterior product,[56] had sense only on the assumptions just stated.

But see how fickle the mind of the Utilitarians also with regard to "cost," a concept truly fundamental in economic analysis! Several definitions became current

[54] Treatise on Political Economy, American edit. of 1827, Book III, ch. 1 and 4.

[55] Pages 341-42. See also Roscher, W. Grundlegungen der National Ökonomie, 2. edit., vol. 1, pp. 405-10; and Rau, K. H. Lehrbuch der Politischen Ökonomie, 6. edit., vol. 1, pp. 412-15.

[56] Political Economy, 2. edit. For a brief discussion of Consumption see Keynes, J., Scope and Method of Political Economy, ch. 3. Note, or for a fuller treatment, Cossa, E., Del Consumo delle Richezze, 1898.

after 1800. For instance, cost as labor expended upon the object, or as labor necessary to its reproduction, or as labor saved for the buyer of the article if otherwise he should have to produce it himself. In each case the standard and the measure both were labor—a notion of long lineage and revived by Smith,—but owing to differences in personal capacity or productiveness and in rates of production relative to two or more instances of time a choice had to be made which some found embarrassing. Besides, there was the idea of abstinence of Senior and J. S. Mill and A. Marshall; the distinction between labor or material outlays and monetary expenses, past or present or impending, and finally the idea of labor pain which Cairnes discussed at leisure in his "Some Leading Principles of Political Economy Newly Expounded," 1874. In America Carey stood for reproduction costs; on the continent the original costs figured most prominently, though the dynamic aspects of the problem received attention especially after 1850.

Laws.—But given these several definitions, the weightier question of course was that of laws ruling economic interactions. What laws could be found, and how were they to be formulated? The development of economics as a science would have to be gauged chiefly by success in this field. It was the boast and glory of the Utilitarians that they had improved upon original statements and delivered unto the world a set of facts upon which wise men might build, if they cared to prosper or help others to prosper.

As a general, but not uninstructive conception of such economic laws, that of Keynes in his "Scope and Method of Political Economy," 1891, even though written with knowledge of the marginal standpoint, may be cited first. Among propositions of universal validity he mentions:

"A general rise of values is impossible; if two kinds of commodities have the same law of utility, that which is rarer will be the more valuable; of different methods of production which can be used for obtaining a given result, the one that can do the work the most cheaply will in time supersede the others; facilities of transport tend to level values in different places, while facilities of preservation tend to level values at different times. In the same category may be placed such propositions as that no commodity or service can serve as a universal measure of value between different times and places, and that general over-production in a literal sense is impossible." [57] Most of these assertions, it will be seen, are deduced directly from premises in psychology; while the first is an axiom and the second an inference from the fact of unequal incomes.

However, one must go to particulars in order to appraise correctly the value of Utilitarian economics; and here the first crucial test concerns itself with the determination of price.

Thanks to definitions of value and cost already given several standard solutions came into vogue. At the outset namely labor was deemed to be not only a sufficient *cause*, but also the sole *measure* of value, respectively of price. The question merely arose whether it should be labor spent in the past or labor requisite to the *re*production of the good; both being considered determiners by different thinkers. Malthus was among the first to stress costs of reproduction. Carey agreed to this, but thought that labor saved was the criterion rather than labor spent by the producer. Bastiat is best known as the defender of this view, though he can scarcely be called its originator. But furthermore, the Smithian dual treatment of costs,

[57] Page 295.

involving now labor exclusively, now costs as the entrepreneur understood them, was resumed with vigor by Ricardo, with the result that it not merely changed current concepts of capital and profits, but particularly eliminated labor as the chief measure of values. The conflict, to be sure, did not terminate with the recognition of the difference, for we find it discussed more fully by continental writers, and, on the other hand, the labor concept appealed to the radical wing who aimed at an overthrow of the prevailing competitive system; but certainly the logic of events was with the expositors of business expense. These pecuniary outlays were taken more and more seriously. Either as an average or as a maximum, as in the researches of the German Herrmann, they served to explain price. To some like Carey it was expenses of reproduction; to others the original outlay on the supposition that nothing else changed. The facts of *change* had to be ignored, for Marshall's *deus ex machina* in the shape of a long-time cost and a representative firm had not yet been introduced. But on the Ricardian principle the price of a finished article was held not to include rentals. As long as his concept of one-use lands, no-rent lands, differential productivities, and population-pressure seemed irrefutable rent could not figure in such prices.

But what of the law of supply and demand? Was this to be trodden under foot because of costs in the objective sense? The answer was: By no means. Demand, meaning by it want accompanied by purchasing power, was as genuine a factor in the situation as ever; but one should, nonetheless, regard it as only a function of value on the one hand, and of supply on the other. Malthus, e. g., had already warned his readers that supply and demand is "the dominant principle in the determination of prices," and "costs of production can do nothing but in subordi-

nation to it, that is merely as this cost affects . . . the relation which the supply bears to the demand." [58] This was in itself quite a conundrum. However, by the time that J. S. Mill wrote his "Principles" it was necessary to go still farther, lest the public should be altogether in the dark. So now, in spite of an audacious juxtaposition of labor costs and expenses—in which even taxes had a part—the theorem was propounded which has since become a commonplace. To wit, we are told that supply and demand cannot be ratios, nor that it is fair to think of a causal relation running in one direction, since in reality the definition of demand and value prove merely that supply and demand must equate at some point, for "competition equalizes them." Say had long ago called attention to the inadequacy of the Smithian formula. Now, a half century later, it is argued that demand depends on value just as truly as the reverse may be asserted. For commodities therefore "not susceptible of being multiplied at pleasure" (and this class Mill admitted is large), "the value which a commodity will bring in any market is no other than the value which, in that market, gives a demand just sufficient to carry off the existing or expected supply." [59] Nominally this explanation covered only the group mentioned, namely, the non-reproducibles at will, but on second thought its importance for all other articles became palpable enough. If Mill, therefore, found a price law for goods not reproducible at all, and a second for goods reproducible at changing returns, this did not deceive other writers. Increasingly expenses are analyzed at the sacrifice of non-competitive costs; increasingly the issue is seen to lie as between demand and supply, the latter going back to expenses. The absence of a proportionate

[58] Principles of Political Economy, ch. 2, § 3.
[59] Mill, J. S. Principles of Political Economy, Book III, ch. 2.

rise or fall of prices for changes in supply is noted by statistical inquiries. Tooke's announcements exercised a deserved influence over theorists in his country. The law of price continues to absorb people's interest, but unanimity is no longer to be hoped for as perhaps in the days of Adam Smith.

As to productivity, meaning output relative to outgo, a consensus of opinion could more easily be reached, for it was understood pretty widely that such rates referred to physical quantities. Rightly or wrongly, the phrase was given that meaning. It had not infrequently been stressed how nature set bounds to supply, the Ricardians bewailing her stinginess, just as the Physiocrats had rejoiced in her liberality. But independent of this productivity could best be studied as a change of returns in tangible goods. Laws of nature, Mill wrote in his "Principles," here ruled inexorably, while distributive arrangements rested with man himself. Waiving altogether the logic of this distinction, in the light of Utilitarian premises, we need merely ask whether at that rate the law of diminishing returns could fitly be associated with agriculture; and the answer will be: Yes.

Once more a collectivistic view crept into an analysis supposedly resting on competitive premises. The ratio of food to population was too important to be disregarded. Not value-returns per value, not unit-cost in stuff per return in stuff even, but subsistence per capita—this became the burning question. It was not by accident either; for the swiftly growing population of the United Kingdom, due to the industrial revolution, cut at the old-time surplus of foods in two ways, first by reducing acreage, and secondly by industrializing capital so that exports of manufactures could furnish a basis for food purchases abroad. Thus the birth-rate turned out to

depend in one sense on industry, while yet in another the relative decline of farming haunted theorists. Intensification could accomplish much, but a disproportionate outlay of materials and labor went with it. Hence the fear of falling productivity measured by weight and tale; hence the flow of books and tracts from the press, condemning now the laborer with a large family, now employers for their tolerance of conditions that seemed truly barbarous. Nothing else than a careful husbandry of resources could alleviate such misery. On the one hand thrift among wage-earners; on the other a correct use of surplus-funds; this appeared to be the logical way out of difficulties. Saving was everything, or at any rate far more than technical progress. Conservation, not invention, was held to be the source of opulence. Capitalists therefore figured as the saviors of the country if they administered their reserves prudently.

The distribution of the social dividend became an important matter for this reason alone, though to be sure it was also of cardinal significance from a theoretical standpoint. But in spite of definitions and price analysis incomes were not consistently measured as prices, as for instance Say and Rau had urged in their endeavor to reduce all shares to three: Wages, profits, and rent. A distinction was made before long between net profits and interest, due indirectly, no doubt, to the growing prominence of banking and credit. But from the outset the law governing wages was considered different from that governing rent, and both were set apart from the analysis of interest or profits, until Malthusianism was definitely abandoned.

Rent which according to Smith was a price paid to privileged landholders was thereafter explained as a result of over-population. It was a differential product,

measured by yields above what worst soils could bring, and certain to rise so long as the number of mouths to feed increased faster than land itself. There was no remedy for the evil, if so it might be called, for prices followed maximum costs of production at any given instant of time, and if the owners of superior soils pocketed the differential, that was human nature everywhere. The fault lay not with the proprietor, but with nature or with the people who would marry and reproduce their kind regardless of expenses.

However, it was eventually admitted that the idea of differentials was not applicable merely to agriculture. If rent, as in successive installments had been shown by Anderson, West, Malthus, and Ricardo, was due to unequal productivities of the soil, there were also differences of yield in the use of labor or of capital. Natural inequalities existed everywhere. There was nothing peculiar about the circumstance that accounted for rent. "Superior mental power, regarded with a view to the production of wealth," Cairnes emphasized in his writings, also "is an instrument of production perfectly analogous to superior fertility of soil; they are both monopolized natural agents, and the share which their owners obtain in the wealth which they contribute to produce is regulated by precisely the same principle." [60] So F. Walker, commenting on Archbishop Whately's discussion of rents and profits, adds: "Profits, the remuneration of the entrepreneur, partake very largely of the nature of rent, being a species of the same genus; and so far as this is the case, profits do not form a part of the price of the products of industry, and do not cause any diminution of the wages of labor." [61] The over-

[60] Character and Logical Method of Political Economy, 1869, p. 13.
[61] Political Economy, Part IV, ch. 4, § 279.

confident Ricardians thus were told: If rent formed no part of price, neither did profits or wages above subsistence, and if rent was a justifiable increment regardless of social consequences, so would be any rate of wage or profit or interest, no matter how remote from competitive limitations. The error of drawing a line between price and income thus led to the same simplification that a strict price analysis would have involved, for not only was the law of diminishing returns expanded into a principle of natural inequality among all factors of production, but in addition all shares, interest not excepted, proved to consist of a subsistence allowance and a super-share, the battle waging about the disposition of this latter.

Particularly under the static conditions premised by both Utilitarians and later the Marginists such a conflict was inevitable if superiority meant no more than greater earning powers according to definition of value and productivity. Since the economic process was pictured as one of constant factors, pricing and distribution had necessarily to entail a struggle among claimants. It was naturally held that what one gained another lost. Even differential mental abilities would thus hold out no hope to society at large. The masses of the people were thrown upon their own meager resources in a contest where instincts invariably succumbed to selfish cunning. Partly for this reason Utilitarian economics became a "dismal science," as Carlyle dubbed it; and from this standpoint also Ricardo could make the often quoted remark: "Wages like all other contracts should be left to the fair and free competition of the market and should never be controlled by the interference of the legislature." [62] If pricing was the result of the forces premised by the hedonists, and

[62] Principles of Political Economy, ch. 5.

if the deductive method had to work with the materials offered by the environment social and physical at any one moment, then certainly there was no other outlook possible. Malthus was right in saying: "It is most desirable that the laboring classes should be well paid, for a much more important reason than any that can relate to wealth; namely, the happiness of the great mass of society. . . ." But "*owing to the principle of population all the tendencies are the other way.*" [63] The iron-law of wages of Rodbertus which was in everybody's mouth could not be defied as long as the Malthusian principle stood unshaken. The wages-fund idea itself was in no wise in contradiction with it, since any surplus voluntarily bestowed by capital upon labor served but to increase the number of children hungering for food. Thornton might write on "Overpopulation and its Remedy," 1846, but what could be done about it?

Still, the wages-fund concept had its roots not in theories of population, but in erstwhile definitions of production and capital. It must be charged against the Physiocrats and Smith that men later tried to determine the wage-level by a ratio of surplus to laborers. For since to produce meant to turn out concrete commodities, since capital was a surplus due to methods of production considered constant, it followed that the owners of "stock" were the umpires in the game. They decided who had won, the non-producers or the producers. They held the destinies of the nation in their hand because they could use their wealth either for further production of materials, or for maintenance of retinue and luxuries, personal and official services of all kinds included. In his "Principles" Mill thus divides circulating capital spent upon both productive and unproductive labor,

[63] Principles of Political Economy, 1821, p. 365.

as he defined the terms, by the total number of hired laborers. The quotient was the average wage, while the dividend constituted the "wages-fund."[64] The greater the number of unproductive laborers, the worse off eventually the whole population, for output could not then increase as fast as the actual surplus of foods might allow.

Utilitarianism was not of course seriously affected by this argument, as the future proved sufficiently. However, it seemed significant for a determination of wages if one had in mind the relative obligations of capital and workingmen; and from this standpoint it was no small matter if J. S. Mill recanted after men nowhere near his equal had raised their objections. Opposition came from various quarters, some of them outside of the United Kingdom. Thus Rae and Carey derided the static notion of wage involved in the wages-fund doctrine, while Thünen and Walker (F.) advanced a productivity theory that accorded to labor precisely what Mill had so much at heart, namely, a share somewhat proportionate to technical improvements. The German economist put up a formula by which the laborer should get a sort of geometrical average of products resulting from his and the machine's efficiency. What the least effectively employed man produced was to be augmented by a portion of capitalistic effort. Walker, on the other hand, knew nothing of margins, but contended that competition naturally favored an equitable distribution of the product, labor obtaining a wage that rose as invention multiplied its productiveness through additional or superior use of machines. This then was just as promising as Cairnes' notion of a non-competitive laborer who could not be cudgeled by an unscrupulous employer.

[64] Book II, ch. 11, § 1.

Besides—and without presuming to have mentioned all the doctrinal points regarding net profits, over-production, currency and price-levels, credit and taxation—it must be admitted that theories did not after all find extended application in government. The value of economics in this respect was not as great as might have been expected. Public authorities everywhere, however sincere their desire to benefit by the new gospel of wealth and welfare, sooner or later fell back upon their own devices. Excepting the field of banking and public credit, where the influence of economic doctrine was marked both in England and on the continent, governments did not respond very sympathetically. For the repeal of the corn-laws in England had reasons other than Smithian theories, which came in the nick of time but could not have won a fight against practical interests. Besides, there is the irrefragable evidence of other countries whose commercial policies almost consistently ran counter to Laissez Faire. Even in the United States Protection made considerable headway before 1846, while in Europe France alone followed the British example for any length of time. It is symptomatic indeed that Carey and List stood for protection, while Bastiat and Mill about the same time espoused free-trade; or that the countries least conversant with economics, such as Denmark, Belgium, Holland, almost regularly upheld international competition. The great majority of French economists throughout the nineteenth century preached free-trade, but rarely to please the people. Their position was somewhat like Cournot's who in his "Researches into the Mathematical Principles of the Theory of Wealth," 1838,[65] had to confess that protection need not be a bad thing if it did not offset ad-

[65] Last chapter.

vantages gained by other opportunities lost, or if it didn't lead to class taxation; both of which it was difficult to prove. So, under the circumstances, what else was there but to consent to policies diametrically opposed to a static view of production? The free-trader faced an insurmountable obstacle!

Decline of Utilitarian Economics.—Utilitarian economics, however, remained not merely unheeded at courts of legislation, but what is more to the point, weighty theoretical objections appeared. The theory of diminishing returns, for instance, was extended by v. Thuenen to the whole realm of production. It was shown even then that rightly understood agricultural laborers were little worse off than the urban. In the second place the Malthusian theorem was combated vigorously by a number of writers partly out of mere humanitarian sentiment, partly because the case for agriculture was not held to be nearly as grim as the English preacher had made out. His later concessions were therefore taken to be more truthful, and if so the distributive problem had to be, of course, restated. In the end such was the effect of the counterblast of men like Lloyd, Chalmers, Gray,[66] Scrope[67] and Donisthorpe in England, Sismondi in France, and Wayland and Carey in America. But for that matter, had not Senior himself said: "A population increasing more rapidly than the means of subsistence is, generally speaking, a symptom of *misgovernment* indicating deeper-seated evils, of which it is only one of the results"?[68]

The wages-fund idea had been definitely abandoned at the time of J. S. Mill's death (1873). It could not survive the successive attacks of Thornton, Jones, Leslie,

[66] Gray, J. The Social System, 1831, ch. 10.
[67] Scrope, G. P. Principles of Political Economy, 1833.
[68] Political Economy, edit. of 1849, p. 49.

and of Herrmann in Germany. Mill himself had recognized its uselessness and said so openly. The Ricardian rent doctrine suffered at the hands of Jones, Rodbertus, Carey, and Bastiat. In fact, it was one of the first fundamental points to be assailed in an attempt at obtaining a clear-cut case for competitive pricing. As a monopoly, rent had a place and could be fitted into rules, each and every one of which had its exception. But otherwise it occupied an anomalous position, besides being vulnerable from the historical standpoint as Carey was not slow to indicate.

That labor measured values was also found to be an untenable assertion, the ultimate answer to which was a resort to either costs of reproduction, as with Malthus, or to supply and demand which really involved a *petitio principii*, or to monopoly or maximum costs, these latter meaning for the most part enterpreneur expenses, the discussion of which is particularly convincing in Herrmann and Mangoldt. But if all this was granted, what became of the relation of price to producer-shares? Evidently, the two need in no wise coincide. Not only were there incomparable kinds of labor, as MacLeod and Cairnes had pointed out; not only were there discrepancies involved in the traditional analysis of prices or shares, but furthermore the reliance upon laws of distribution psychologically derived had proven futile. Ever and anon the non-competitive standpoint encroaches upon the competitive. Even Malthus could write: "If we were to define wealth to be whatever has value in exchange, it is obvious that acting, dancing, singing, and oratory would sometimes be wealth, and sometimes not." [69] Precisely in this temper had J. Rae in 1834 enlarged upon the earlier criticisms of the Earl

[69] Principles of Political Economy, p. 34.

of Lauderdale, drawing a sharp line of division between social and individual wealth, and ending his discourse with a plea for scientific government. Rodbertus and Wagner in Germany accentuated social as against acquisitive wealth, an awkward way of renouncing the Utilitarian premises. Continually facts outside of the exchange régime were brought in to supplement explanations from within. In his "Principles of Plutology," 1876,[70] Donisthorpe passed judgment on "classicism" as a whole, convinced that neither the law of the division of labor, nor free-trade, nor Malthusianism, nor Ricardian rent had justified itself.

The golden harmonies, too, that Carey and Bastiat sung about, had existence only *outside* of the Utilitarian economics, if we may believe these men. In 1837 Carey could write: "The prosperity of nations, and the happiness of the individuals composing them are in the ratio in which the laws of nature have been allowed to govern their operations, and . . . the poverty, misery, and distress that exist are invariably to be traced to the interference of man with those laws, and they exist in the ratio of that interference";[71] but thirty-five years later we read in "The Unity of Law": "Such is the politico-economical science whose . . . every suggestion is opposed to that which common sense and common humanity teach. . . ."[72] The system supposedly grounded on solid premises had led to absurdities, permitting conditions of life for which Carey entertained nothing but contempt.

His was a confession stronger in words, but not more sincere than that of Bastiat on behalf of the millions. The belief of this Frenchman that "God has

[70] Ch. 1.
[71] Principles of Political Economy, Part I, p. xvi.
[72] Page 29.

placed within each individual an irresistible impulse toward the good, and a never-failing light which enables him to discern it" [73] was rudely shaken by the distress of the people around him.[74] Somehow it became clearer as the decades rolled by that the cosmic harmonies created nothing but discord among humans. Individualism rampant had not justified the optimism of an earlier age, for misery was real and widespread. Over-population was a fact, not a myth of the philosopher. Crises and years of depression went over western Europe again and again, at not too long intervals. A proletariat had emerged out of the industrial revolution that was hostile to Let-Alone policies and eager for betterments. Political rights were demanded and yet, upon use, found an insufficient protection against ills that the organization of production and exchange somehow gave rise to. Legislators felt the need of heroic efforts to appease the multitudes, and theorists were impressed with the breach steadily widening between what they preached and what grim reality proved. Economics apparently would either have to revise many of its definitions and arguments within the limits set, or else start over again from altogether new premises.

The issue was clear, but the outcome unpredictable.

[73] Harmonies Economiques.

[74] For a criticism of Bastiat and a clear distinction between economic expediency and abstract justice see Cairnes, J. E., in Some Leading Principles of Political Economy Newly Expounded, 1874, p. 269.

CHAPTER SIX

HISTORISM

Idea of Collectivism.—The Historical School among economists became a power to reckon with during the sixth decade of the last century, that is, about the time that Utilitarianism had reached the apogee of its fame. It might, therefore, seem strange that the two should be virtually contemporary if we didn't know that the Historical movement, or—to give it a brief name—Historism, was as much a reaction against Smith's Naturalism as against the Ricardo-Mill group, while furthermore Historism was continental in its origins and hence not likely to agree with British Utilitarianism in any form.

To the founders of the Historical School so-called, which was represented at first by a mere handful of men, Naturalism and Utilitarian economics were substantially one —a view one can hardly condemn once the Historical outlook is properly understood. There was no doubt that the two earlier economic systems showed important resemblances, in that both built on individualism, on a static notion of life, on premises generally speaking that yielded conclusions altogether distinct from actualities. Whatever the differences between Naturalists and Utilitarians, or between members within the latter group—and they were not inconsiderable—they did offer a united front in their treatment of Historical critics. They insisted upon the universal validity of their theorems, con-

vinced that after due allowances had been made almost any case could be judged by their principles.

Now, the Historical School objected to this way of dealing with a difficult subject. Its adherents felt that things were not as simple as they seemed, that superficiality was frequently mistaken for mastery, and mere logic of reasoning for verification in the concrete. The nonchalance and gruff indifference of Utilitarians to ethics was deplored as something beneath social science. At all events, it was argued, much remained to be done if the misery of the masses was not to increase, thanks to those very gentlemen of hedonistic leanings.

One group stressed collectivism without having recourse to an historical doctrine; the other gave all facts, and economics particularly, an historical setting, but in doing so championed collectivism no less than the first. All members of the Historical School were collectivists, but the converse did not hold, though the majority of collectivists did employ the historical method as every student of socialism, utopian and scientific, is well aware. We might say therefore that collectivism is the broader term, with the understanding, however, that Historism is not thus accused of narrowness in any other sense. For no matter how one may finally appraise the achievements of the Historical Movement, there is no doubt of the salutary effects it had upon social science.

Collectivism stood for a more or less definite concept of public welfare, for an emphasis on the differences between men, the interdependence of functions and rights among individuals, the relativity of good and evil, or truth and error, for the opposition of self to social interests, and the rationality of control over citizens by a central authority. Historism, in its turn, represents the habit of looking back for an explanation of existing

ideas or institutions. A belief in change and motion as an eternal factor in human experience, the idea of relativity just as collectivism dealt with it, and finally the search for repetitions which somehow might justify the formulation of rules—such were salient features in Historism. Actualities outside, and the need for applications were both constantly kept in mind. Whether there was a purpose back of this vast phantasmagoria of history in the making, or of history already made, not all collectivists or historians were willing to say. For instance some of the French, English, and German utopians and less radical critics of Utilitarian economics frankly preached theism, convinced that God must right things, that history moved in a definite direction, or that even in a static view the hand of Providence could not be ignored. Yet the greater number of collectivists of both shades left the question unanswered. The aim was to be scientific as truly as the Utilitarians had professed to be, with a similar disdain for metaphysics and a bold assumption that the facts themselves, if carefully collated, would furnish the clew to all riddles.

What the two movements, the collectivistic in the wider and the Historical in the narrower sense, had in common was a violent antipathy to the hedonistic premises of Utilitarianism, to the whole scheme of Smith and the Ricardians for an individual measurement of legal and moral rights. Not the self, but society, not one but all, not a class but the entire nation, and perhaps not even any one nation, but rather mankind in the lump, such were the contrasts made by the rebels in economics. Done with Absolutes, this was one slogan! Eighteenth century empiricism and materialism revived for new purposes. As the Baron d'Holbach had written in his "Nature and Her Laws as Applicable to the Happiness of

Man Living in Society": "Man will ever remain a mystery to those who obstinately persist in viewing him with eyes prepossessed by metaphysics; he will always be an enigma to those who shall pertinaciously attribute his actions to a principle of which it is impossible to form to themselves any distinct idea." Transcendentalism, so Saint Simon declared, was the bane of thinkers who sought light on social problems.

But furthermore, ethics itself could not be posited safely on anything but an empirical view of life. Man and his actions in company with fellow beings must furnish the key to right and wrong. A moral code depended on studies that had nothing to do with the ruminations of a closet philosopher. Hence economics must include more than the exchange system of any given time or place. The science that hoped to measure values and describe accurately, for long periods to come, the process by which wealth was produced, distributed, and consumed could not confine its investigations to a pecuniary world; for marketing was not the whole of intercourse, nor earning money the sole proof of production. Economic laws, consequently, were invalid if not related to the social process as a whole. A much greater multiplicity of events had to be reckoned with than the Utilitarians or Naturalists imagined. Law was born of circumstances in time and space. Variability was the only thing constant or continuous. Even the premises of Utilitarian economics were subject to this revision, as for instance the postulate of private property and freedom of contract. Why ground a system of economics on an institution that might disappear in the course of time, indeed which had not always flourished as it does to-day? The collectivists took note of this possibility and changed their reasoning accordingly. "The general opinion

seems to be," wrote the authors of the "Doctrine of Saint Simon," which came from the press soon after his death in 1825, "that whatever revolutions may take place in society, this institution of private property must forever remain sacred and inviolable, as if it alone is eternal. But in reality nothing could be less correct. Property is a social fact which, along with other social facts, must submit to the laws of progress." [1]

This is the new attitude adopted by the collectivists of many classes. Economics treats of relative facts, and in the end nothing may be more important than an adaptation of means to a practical policy. Democracy itself could not mean much without economic guarantees. To have rights for exercise of power must include possession of goods whose enjoyment was a prerequisite to other abilities. Representation must be supplemented by organization, or by Association in a more technical sense. The welfare of each lay in coöperation; thus alone could, under guidance of qualified persons, society and the Ego, be brought on one plane of thinking.

Collectivism in France.—Now, this departure from individualism, Naturalistic or Utilitarian, had its inception in ideals older than the science of economics, or at least just about as old. Not the nineteenth, but the eighteenth, century laid the foundations. In France the collectivistic movement first gained a footing, though the weapons it employed were largely of British origin. The epoch that rang with the shouts of natural law and natural rights gave birth also to the communistic spirit of the Revolution. Not that this latter itself stood primarily for communism or socialism as later understood, but that many of the arguments basic to the

[1] Doctrines de Saint Simon, Exposition, 1829, quoted by Gide, Ch., and Rist, Ch., in their History of Economic Doctrines, transl. by Richards, R., p. 222.

revolt against the Ancient Régime were adaptable also to plans of a distinctively economic nature. The Physiocrats honored private property and government. Nothing was farther from their intentions than an upheaval such as befell their country in 1789. But in siding with the Encyclopedists, in pointing to the ethics of nature as against human follies, in describing the process by which wealth came and went in annual waves, all of it the fruits of the earth, but much of it consumed by non-producers—in discussing jurisprudence and morals, politics and law, wealth and waste from the standpoint of a science whose propositions reigned above monarchs, the French thinkers between 1740 and 1790 prepared the public mind for sweeping changes.

Mably might ridicule the Physiocrats, but that only bettered the case for reformers. Morelly might struggle with adversities, obscure in his own day and little feared by the clergy, but his "Essay on the Human Spirit," 1743, his "Code of Nature," 1755, left their mark upon minds at the very center of political affairs; for in Siéyès and Mirabeau the Younger the revolutionists found leaders of the first rank. And others rose from the rank and file: Babeuf, who declaims: "Perish the arts, but let us have real equality." "Let everything return to chaos, and from chaos let there rise a new and regenerated world"; Barnave, who anticipated many of the ideas woven into a materialistic philosophy by Karl Marx! And then the utopias of Cabet, Fourier, Simon, and Blanc! Industrialism and Association for workmen that otherwise must succumb to capital! Solidarism as against individualism which, being a free-for-all fight, was bound to enslave the masses! To each man his product, or better still perhaps, like shares to all lest some perish by their own hand, a victim of guiltless in-

feriorities. Government of a new sort, since the old is the antithesis of reason! Or as Saint Simon put it: Either government or genius, which do you need most? Will France die when its functionaries of state are buried, or when the inventors and artificers cease producing the wealth of nations? Let those who can think provide the answer!

Soon after these several onslaughts upon hallowed traditions and moribund institutions comes Sismondi, the first after J. B. Say who voices the national demand for a clarification of economic theses. But unlike his predecessor he does not stop at the point where he begins. He does not, after his first essay on economics, continue along the route originally planned. Events carry him to unforeseen conclusions. He changes front and by 1819, in "The New Principles of Political Economy" enters upon a critique of dominant thought such as had never come from the pen of any writer before. A real, earnest attempt is made to reconstruct economics. The title of the work was not inaptly chosen!

It is the collectivistic spirit that greets us here and gains our friendship. The tone is convincing, and the treatment brilliant. Eloquence supplies what in cogency of argument is here and there lacking. If it were not for interspersions distinctly of his own time, one might feel transported back to Kameralism and the earlier treatises on political science. For the variety of things discussed is endless; the manner of exposition at times careless; logical sequence, such as the Utilitarians had cultivated, nowhere in evidence.

Sismondi—to illustrate the scope and intent of his work—gives us his "Principles" in seven Books. The first expounds the question of field and method; the second treats of the origin and growth of wealth, of ex-

change and consumption, including a consideration of the relation between the distribution of wealth and production; the third part deals with territorial wealth as incorporated in agriculture, slaves, etc. Tenantry, feudalism, rents, and policies with regard to them engage our attention. In the fourth Book commercial wealth is discussed, particularly traffic, markets, interest, machinofacture, monopolies, and tariffs. In the fifth we find theories on money, price-levels, interest, coinage, credit, and banking. The sixth takes up taxes and public loans; while the last has to do with population, employment measures, and like steps calculated to benefit the masses. At the end of such an enumeration of topics one asks: Could anything be more ambitious, or less formal after the rigid logical constructions of the Utilitarians? Surely not!

But it was not merely a case of defiantly overriding the traditions of an older school. Rather, we must give credit also to Sismondi for his originality of conception and the completeness with which he anticipated the announcements of socialists. Indeed, much of what is commonly associated with Historism will be found in the "New Principles" where exuberance of fancy vies with breadth of erudition. Thus Sismondi it was who condemns Smith's universalism; who prefers induction to deduction, stating the historical argument at length; who stresses the unity of social processes of which economics represents but a part; who connects the latter with art and ethics in the belief that art is more fruitful than any bare account of facts; and who says: "Political economy at its widest is a theory of charity. Any theory that upon last analysis has not the result of increasing the happiness of mankind does not belong to the science [of economics] at all."

To Sismondi public wealth is more important than individual income. Coöperation is preferable to competition, and this the more so since an unequal distribution of wealth has, as he argues, for generations brutalized what otherwise might have been a fair contest. What else, he queried, could grow out of such inequitable conditions than class consciousness, the exploitation of labor by capital, and periodic unemployment due to the steady encroachment of machinery upon manual crafts? Economics therefore had to be restated in conformity with historical and moral data; or else the Utilitarian idea of inexorable laws dividing men into task-masters and serfs would precipitate a merciless struggle, a disaster indescribable.

Collectivism in England.—Put differently then, Sismondi was groping for a theory of prosperity; and in this he was not alone. In England, too, even before socialism was made "scientific," the conviction was gaining that something was radically wrong with the orthodox doctrine. The French Revolution had set men to thinking, and furnished arguments that here and there are welcomed by rebel economists. To free the new science from shackles of a recent forging, this was their sincere endeavor.

Godwin for instance, who had started Malthus on his inquiry about population, was as opposed to unlimited private property as he was convinced of the liberality of nature toward mankind. In his "Enquiry Concerning Political Justice and Its Influence on Morals and Happiess," 1793, he wrote: "The present system of property confers on one man immense wealth in consideration of the accident of birth." . . . "Hereditary wealth is in reality a premium expended to retain mankind in bru-

tality and ignorance." [2] And further, "if luxury were banished, the necessity for the greater part of the manual industry of mankind would be obviated." [3] So here was a program that left little room for the laissez faire of approved types! And similarly with the writings of economists like Thompson, Hodgskin, Bray, and Gray who, while not taken seriously by the dominant group, nonetheless exerted a visible influence upon economic philosophy, especially on the continent. Again, later on we encounter in England such champions of Christian or ethical economics as Carlyle, Ruskin, Kingsley, and Maurice; while among Americans Carey might be mentioned as an idealistic protestant against Utilitarianism. The approach to the problem differed of course according to temperament and technical interests, but in general the net result was the same: It was always a cry against the premises and principles that Ricardo had first codified for the benefit of the hedonists. Collectivism had a vigorous growth, even if for the time being its reception was not cordial.

Thus, to quote only a few principal writers, Thompson made it his duty to apply Benthamism in the most magnanimous manner possible, by reasoning as follows: Maximum happiness for the largest number is the natural goal. Any means to this end is justifiable. Now, the first condition to its attainment is a possession of goods, as Bentham among others had taken pains to demonstrate over and over; and owing to the equal capacities of human beings to suffer or to enjoy themselves, equal income is the first essential to the attainment of the goal set. Hence the need of reform in general, and hence the necessity of curtailing the privileges of the wealthy! If

[2] Vol. II, p. 250.
[3] Vol. II, pp. 330 and 344.

not equality, the next best thing would be income according to productiveness; but with a redistribution of property this would of course change, too, some having their services valued more highly, and others less so.[4]

Equality, however, had a physical aspect as well as a psychological. Not only was it true that "all members of society (cases of malformation excepted) being similarly constituted in their physical organization, are capable by similar treatment of enjoying equal portions of happiness," [5] but thought itself had a basis admitting of quantitative measurements. "What is thought but motion produced and felt in the brain?" "What is labor but motion . . . in coöperation with the ever-active engines of nature?" [6] The odious comparison of intellectual and manual labors, it was said, lacked point because all grades of work stood on a level except for differences in degree. Hobbes and the French materialists were once more cited to substantiate this claim. The case for the despised masses was exceedingly strong because science, in a variety of ways, took the ground from under the capitalistic edifice.

Hodgskin in his lecture on "Popular Political Economy," delivered in 1826 and published the next year, expanded this argument. He says bluntly: "I can understand how a right to appropriate the produce of other men, under the name of interest or profit, may be a stimulus to cupidity, but I cannot understand how lessening the reward of labor, to add to the wealth of the idle, can increase industry or accelerate the progress of society in wealth." [7] Again: "It is a miserable de-

[4] Thompson, W. An Inquiry into the Principles of the Distribution of Wealth Most Conducive to Human Happiness Applied to the Newly Proposed System of a Voluntary Equality of Wealth, 1824, pp. 5, 586, 594.
[5] Ibidem, p. 4. For his view on competition see p. 369.
[6] Preliminary Observations.
[7] Page 254.

lusion to call capital something saved. Much of it is not calculated for consumption, and never is made to be enjoyed." [8] And further: "All capital is made and used by man, and by leaving him out of view and ascribing productive power to capital we take that as the active cause which is only the creature of his ingenuity, and the passive servant of his will." [9] That is, the Mercantilists were right in calling labor the father of wealth; Smith did well when he put the emphasis upon it rather than upon the soil as Physiocratism was wont to; but the Utilitarians committed a grievous mistake in adding property rights to the list of producers who were entitled to a share of the social dividend. For things, though rights from a person's standpoint, could not be agents themselves, nor could rights of their own power *create* what was to be distributed, to wit, wealth. Economics, hence, should be redefined so as to include more than the exchange mechanism,[10] lest individualistic norms identified production too much with an exercise of mere legal rights. The possibilities of meliorism were to be studied anew to give everybody a better budget. For, we read in Hodgskin's Lectures: "The distress our people suffer, and the poverty we all complain of is not caused by nature, but by some social institutions which either will not allow the laborer to exert his productive power, or which rob him of its fruits. I can never therefore join those political economists who seem to be fond of calumniating nature in order to uphold our reverence for the institutions of man." [11]

Karl Marx knew of these works and used them freely. He quotes them now and then, and acknowledges his in-

[8] Page 255.
[9] Pages 246-47.
[10] Page 23.
[11] Pages 267-68. Similarly Gray, J. The Social System, a Treatise on the Principles of Exchange, 1831.

debtedness especially to John Bray whose "Labor's Wrongs and Labor's Remedy," 1839, spoke strongly for a productivity wage.[12] However, it would be erroneous to suppose that the founders of Utilitarian economics were heartless sophists who cared nothing about public welfare. Their position in truth was simply this: They would admit that their premises caricatured human nature and consequently misled reasoners, but they also showed the essential resemblance between them and man as a type, while furthermore there was no way of making economics a science except by abstracting in a somewhat heroic fashion. What was postulated by the Utilitarians met the facts of the situation by and large; no violence was done to experience if it was sufficiently large.

Hence, doubtless, James Mill saw nothing ironical in his statement that "the greatest possible happiness of society is attained by insuring to every man the greatest possible quantity of the produce of his labor," [13] the measure of productiveness being understood to agree with competitive conditions. Yet his son John Stuart as early as 1830, if one may take his words in the "Autobiography" seriously, was impressed with the flaws of "the old political economy which assumes private property and inheritance as indefensible facts, and freedom of production and exchange as the *dernier mot* of social improvement." [14] We know that he projected a work on socialism and that even in his "Principles" of 1848 he displays deep sympathy in the struggles of the proletariat. His heart spoke against his reason. He was the chief formulator of the Utilitarian logic, but at the same time

[12] See, e. g., Marx's Poverty of Philosophy, 1847, translated by Quelch, H., pp. 75-82; and A Contribution to the Critique of Political Philosophy, translated by Stone, N. I., p. 106. These and Marx's Capital, as here quoted, are Charles H. Kerr & Co., Chicago, publications.

[13] Essay on Government, in Encyclopedia Britannica, 1820, § 1.

[14] Ch. 5.

packed into his economics ideas and advice utterly foreign to its premises.

In this respect the later critics were more consistent, for they made tabula rasa of the science, admitting nothing and calling for an entirely new stock of materials. Thus Carlyle penned his essays on Chartism and "Latter Day Pamphlets"; thus Ruskin made his appeal between 1860 and 1873, writing "Unto This Last," "Fors Clavigera," and "Munera Pulveris," and still more. A Christian kind of collectivism was preached that men of literary excellence and reputation sponsored with all their energy. Thus Carlyle writes: "In brief, all this Mammon-Gospel of Supply and Demand, Competition, Laissez Faire, and the Devil take the hindmost begins to be one of the shabbiest Gospels preached; or altogether the shabbiest." [15]

Economics was to become an art rather than a science. "The final object of political economy . . . is to get a good method of consumption and a great quantity of consumption; in other words, to use everything and to use it nobly whether it be substance or service or service perfecting substance." [16] Utilitarian economics to Ruskin seemed a mere travesty of science. He wished to expunge it forever from texts and public records. "Observe," he exhorts us, "I neither impugn nor doubt the conclusion of the science [economics], if its terms are accepted. I am simply non-interested in them, as I should be in those of a science of gymnastics which assumed that men had no skeleton." [17] Man was more than a machine for manufacturing pleasure, and pleasure had other sources than those laid bare by eighteenth century hedonists.

[15] Past and Present: The Working Aristocracy.
[16] Ruskin, J. Unto This Last, § 76 and §§ 77-79.
[17] Page 2. See also Preface of Munera Pulveris.

A like attitude had been taken before also by a few German thinkers, as may be seen in Fichte's "Closed Commercial State," 1800, Thürnen's "Isolated State," whose terminal proved to be a socialistic régime, and again in Gossen's remarkable "Laws of Human Commerce," published in 1855. However, the force of German collectivism, viewed either as a protest against Utilitarianism or as an independent movement for economic uplift, lay not in the chimeras of a Fichte or Gossen, nor even in the sober analysis of Rodbertus who, for several reasons, respected the rights of business even when he regretted their hardness, but in the indefatigable founders of "scientific" socialism. Rodbertus, while true to Ricardo on many questions, admitted the ruthlessness of Utilitarianism and notably in his "Letters to Kirchmann" defended the cause of labor. But his iron-law of wages, his theory of the exploitation of the masses, his writings on overproduction and crises might not have had permanent effects if it had not been for the socialists. It was Marx and Engels who made capital out of the jeremiads of the Prussian bureaucrat.

Socialism.—Socialism in the stricter sense of the word was born in 1847, the year of the Communist Manifesto upon which followed closely, though of course not as an effect, the Revolution of 1848. The roots of the new creed, however, must be sought in French naturalism, whose mechanistic and materialistic concepts Marx and Engels both thoroughly understood in spite of their hostility to a static concept; further in British economics; and still more directly in Hegel's metaphysics.

English materialism became French during the early eighteenth century. The Encyclopedists especially familiarized people with the idea of a mechanism covering not only the physical, but also the moral world. New-

ton's system was presented magnificently, and with greater lucidity than ever before, by Laplace in his "Celestial Mechanism," which appeared at the very end of the eighteenth century. As has been shown in an earlier chapter, the thought uppermost in the minds of thinkers had been for generations the harmonizing of physical laws with human will. The principle of continuity had been made to render services on behalf of students who desired to find a rational explanation of human history. Law consequently had become a by-word of experience not only for natural but likewise for social scientists. There was nothing untoward in Marx's annunciation of Determinism.

Yet one is disposed to believe that socialism would not have had such easy traveling if it had not been for the German metaphysicians who through Hegel (G. W. F.) added the link connecting materialism and historism. For so far materialism had been static, while socialists argued from a dynamic standpoint. And this is exactly what Hegel also preached. His dialectic—itself an outgrowth of epistemological and psychological studies—formed the nucleus of a logic that purported to unify all mental disciplines whatsoever. His idealistic keynote, his postulate of an Absolute, his acquiescence in Prussianism as an illustrious instance of the Idea of a State—all this was but an enigma to men like Marx and Engels. But the old Heraclitian concept of an eternal flux and the thought of the relativity of things sensed or imagined, these were readily understood. What Hegel had said about thesis, antithesis, and synthesis in his attempt at a logical interrelation of knower and the known, and what he himself had developed in other fields, ending with an ingenious philosophy of history, this others determined to use for an appreciation of present and future.

Socialism had no need of a teleological outlook. Conditions seemed to demand attention not on the part of the gods, but on the part of men who knew what they wanted and who could cheerfully come to the assistance of nature by precipitating what eventually would happen anyhow. In this spirit, then, the dialectic of individual learning was elevated to a world principle of history. Hegelianism was stripped of its metaphysics, but the principle of relativity, of change everlasting, of the interaction of things in a steady progression from past to future,—this was left undisturbed. As Engels wrote in his "Anti-Dühring" a generation after socialism had been formally launched: In Hegel's system "for the first time the whole natural, historic, and intellectual world was presented as a process, that is as engaged in motion, perpetual change, transformation, and development. . . . Viewed from this standpoint the history of mankind no longer appeared as a wild tangle of senseless deeds of violence . . . which it were best to forget as soon as possible, but as a principle of the development of mankind, whose gradual march through all its stray paths, and its eternal law, through all its seeming fortuitousness it now became the task of the intellect to trace and discover." [18] This historical concept it was precisely that the older revolutionary gospel of communism had lacked. Facts apparently inexplicable became as clear as daylight once they were summarized into a series of interrelated events tending toward a definite issue.

A common sense view, furthermore, was taken of this unceasing change of things. Experience was the guide, and authority a mere mirror of experience per given time and place. The world was real for all the fleeting-

[18] Socialism, Utopian and Scientific, pp. 85-86 (Ch. H. Kerr & Co., 1917), transl. by Aveling, E. See also the same author's Anti-Duehring, p. 10, and his essay on Feuerbach, L. (Kerr & Co.).

ness of life. What was outside did not originate within, as Hegel believed, but on the contrary our ideas were a picture of an original all about us. Thus Marx could write in his "Contribution to the Critique of Political Economy," 1859: "The concrete thing continues to lead an independent existence after it has been understood, just as it did before, outside of the head. . . ." [19] Knowledge therefore did not change by the bare process of our finding out, but it became a definite asset for men to acquire if they cared.

And what sort of knowledge could be gleaned from history as regards its inner meaning? Well, primarily this, that all non-economic phenomena changed with the economic, these latter being the cause or determinant in a real sense of the word. "The sum total of these relations of production," Marx tells us in that oft-quoted passage which no one can afford to overlook who wishes to understand either the philosophical or the economic groundwork of socialism, "the sum total of these relations of production constitutes the economic structure of society . . . the real foundation on which arise legal and political superstructures, and to which correspond definite forms of social consciousness. The mode of production in material life determines the general character of the social, political, and spiritual process of life. It is not the consciousness of men that determines their existence, but on the contrary their social existence determines their consciousness." [20] And so on. On this account private property could be made dependent upon the economic organization of society. What was once self-evident might later become mysterious, nay, an anachronism not to be tolerated. Legal ideas on wealth would change sooner or later as

[19] P. 293.
[20] Ibidem, pp. 11-12. See also Engel's Socialism, Utopian and Scientific, Introduction.

modes of production changed. The emergence of a proletariat might render unfit for use a set of laws admirable enough when first introduced. Or in the words of Lassalle, whose "System of Acquired Rights," 1862, was hardly less noteworthy a contribution to socialistic literature than his labors as an organizer of men: "Just because every age is autonomous, no age can be subject to the domination of another, and no age is bound to permit the continuance as right of anything that contradicts its own consciousness of right, or seems to it to be wrong."

Socialistic economics, in short, was based on a theory of progress radically different from the utilitarianism of the Benthamites. Orthodox economics, in England and elsewhere, talked of utility, happiness, human foibles and an ever-recurrent sequence of cause and effect, through which rates of return, price, and income should gain validity and precision. The socialists on the other hand took a long-time view and showed how society as a whole moved steadily on, the individual not counting at all, nor will nor truth, which was as inconstant as the social environment whence it sprang. To be consistent, therefore, the founders of socialism should have foregone a right to interfere in the course of events; but speaking as individuals they admitted the possibility of accelerating a natural trend. Hence the economic doctrine; and hence the rejection as stupid and selfish of the Utilitarian premises. Not private property, but public welfare! Not capital, but labor as the decisive element in business! Not exploitation that must degrade the masses, but development of men through control of social surroundings.

Competitive concepts thus lost their merit. The legal postulates were for the most part condemned or quali-

fied; the psychological, and in so far as recognized, subordinated to the function of training under public as well as private guidance. Instead of value, wealth; instead of factorial shares, personal income; instead of diminishing returns, a reapportionment of the funds now concentrated in the hands of a few; instead of maximum production, hygienic consumption and self-realization;[21] instead of class conflicts, international solidarity. Such were the ideals of the socialistic economics which, derived from an ever-active law of progress, aimed at the subversion of the existing order.

The socialists, somewhat after the manner of Saint Simon, but relying more upon the arguments of Ricardo, Rodbertus, and truants like Hodgskin, applied their economic interpretation of history to current customs. They wished to show how value was caused and measured by labor. They resented the spoliation of the many by the few. They traced unemployment and pauperism back to machine-production and the resulting periodic panics. They predicted the demise of capitalism by suicide, as it were, that is as something sure to end prematurely because of the methods employed by the entrepreneur in crushing his weaker rivals. Economic individualism was sure to perish, it was said; science and concerted action could only precipitate the end. Subsistence wages would then disappear, and invention promote a cordial partnership between all grades of labor. For, as Hodgskin, Bray and others had remarked: All kinds of labor differed only in *degree* of effectiveness. Labor alone could create wealth. "All economic goods," according to Rodbertus, "are simply the result of labor. Their cost is purely labor-

[21] See for instance Marx's Critique of Political Economy, p. 279.

cost." [22] . . . "That which determines the magnitude of the value of any article," wrote Marx in his "Capital," 1867, "is the amount of labor socially necessary" . . . "to produce an article under the normal conditions of production, and with the average degree of skill and intensity prevalent at the time." And "each individual commodity . . . is to be considered as an average sample of its class." [23]

As for capital it "does not consist in the fact that accumulated labor serves living labor (-power) as a means for new production. But it consists in the fact that living labor serves accumulated labor as the means of preserving and multiplying its exchange-value." [24] Property rights, that is to say, bring riches where none should be.[25] A social relation is abused and made subservient to vile motives destructive of the social fabric. Nothing can save the expropriated multitudes except a universal law whose workings are clear to any impartial mind. The value of economic analysis is its ability to gather under one formula myriads of particulars which, for any given moment of time, must seem senseless. Economics, in fine, is the science of wealth-phenomena as history reveals them, the fundamentals of human nature and the virtues or truths of the day being intelligible in no other way. What is regular is the dependence of all human expressions upon an economic substratum. The rest is of no consequence.

Relation of Socialism to Historical School of Economics.—Historism in the narrower sense of the term agreed with this main point of the "scientific" socialists.

[22] Letters to Kirchmann, 1850.
[23] Vol. 1, p. 46. For earlier expressions of like tenor see Marx's Poverty of Philosophy.
[24] Marx, K. Wages, Labor, and Capital, publication of Ch. H. Kerr & Co., Chicago, pp. 36-37 and 41.
[25] Capital (Kerr publication in three volumes), vol. 1, p. 342.

It was maintained from the first that the laws of social science should be built out of data scattered over a large period of time, the circumstances and names varying, but the relations observing definite principles which could be discovered the more surely, the more numerous the facts compared. The Historical economists, in their own words, wanted an historical interpretation of economics, just as the socialists wanted an economic interpretation of history. The former took the unity of the economic process for granted, but desired to explain its meaning by the comparative method; the latter started with a general historical concept, and hoped to find in one aspect the clew to all others. The difference is great and hardly suggested by the phrases which sound somewhat alike; however resemblances exist nonetheless and Historism without collectivism of the socialist sort would have been an odd product, a flash out of the clear sky that one can imagine but has not seen.

Of course, it is easy to exaggerate the intellectual affinity between socialism and Historism, as men from both camps have pointed out in a spirit of self-defense. There is no doubt that Historism was national, while socialism aimed at internationalism. Again, the former made no pretense of having discovered *the* formula of which all individual economic laws should be but illustrations, a claim made early by Marx and Engels and upon which, in addition, they grounded their demand for socio-economic reform. And once more, much of the Utilitarian economics, in substance no less than in form and nomenclature, was adopted by the Historical School, the departures being due to a rather typically German interest in Kameralism and foreign policies.

But hardly anything of the Ricardian scheme could suit the founders of socialism. It was not to expound

the laws of science that they quoted the British orthodox writers, but in an endeavor to refute them, to expose to ridicule the arguments of capitalism, or to stigmatize these cold-blooded treatises as a mere deception of the common people. In view of such marked opposition between the two groups on a number of counts it would be an injustice to couple them too closely. However, there remains the fact that they united in a condemnation of the individualistic régime and meant honestly to create a new science of society. Historism no less than socialism was intent upon framing laws of reform conformable to a general theory of prosperity. Economics was to have practical bearings. The ethical norms were to receive due care. The past with its mistakes was to enlighten the future. New standards of manhood from a new knowledge of human nature! A wider outlook for a more specific purpose! Applications in politics which to a Utilitarian economist could only seem needless or contrary to laws eternal.

Historism borrowed some of its ideas from socialistic economics in order to accomplish these cherished tasks. Its literature abounds in references and allusions to works and ideas found in French collectivistic writings, in utopianism, and in the works of Karl Marx or his disciples. Not by accident German Historism culminated in the founding of the League for Social Reform, in 1873! Hardly surprising that the Socialists of the Chair in the universities were in close touch with the Historical group; or that the same fusion of sociology and economics noticeable in Marx also serves as a cornerstone of Historism! When utopianism became "scientific," theorems had to be announced that Roscher and Knies could ill afford to neglect.

Roots of Historism.—Yet the outstanding note of His-

torism, namely its historical mindedness, was not sounded first by the socialists. It antedated their campaign by a century or more. It goes back to a philosophy of life originally derived from metaphysical questions, and gradually made to converge upon a single field: The history of society. Vico in 1725 had published his "Principles of a New Science" in this spirit. The works of Montesquieu, Voltaire, Turgot, Condorcet, and Condillac continued the search for a law of progress, English and German writers developing a science of history-writing whose excellence has since inspired other nations. In England Gibbon gave to the world the first volume of his "Decline and Fall of the Roman Empire" in 1776, the year that Smith published the "Wealth of Nations," and Bentham his "Fragment on Government." In Germany Lessing wrote on the "Education of the Human Race," 1780, while Herder soon afterwards began his "Ideas on a Philosophy of the History of Mankind." What with the labors of the professional historians, whose publications set a new standard of research at the turn of the eighteenth century, and the philosophical works of Kant, Goethe, Fichte, the two Schlegels, and Krause, whose "True Lesson and Philosophy of the History Applicable to a Science of Right Living" (1815-25), appealed to large audiences,—what with this fostering on all sides of the historical outlook its application to economic problems might have been expected. In France economics and history had already been combined by Sismondi and Cousin, the latter a Hegelian who on his return from Berlin infused new vigor into French philosophy. Buchez wrote one of the first popular books on the science of historiography in 1833, while Guizot, Michelet and Thierry wrote masterpieces that brought the past back

to life again, a guide for the present, a mirror in which to read the soul of Frenchmen great and little.

And then there was Comte, the founder of social physics or sociology, as he later christened it. Comte, who had epitomized history in his three stages of development, the theological, metaphysical, and positive or scientific, and in whom the idea of continuity, interaction, and human control governed everything else. In place of divine guidance, the will of man! As an improvement on intuition, reason armed with knowledge! For the sake of progress, one social science resting on all others, but to be perfected only by exhaustive inquiry into social phenomena past and present.

German Historism had these thoughts and works to fall back on for a systematization of its own concepts. It was surrounded by men who studied and taught history in and out of university. The followers of Niebuhr and Ranke, Savigny and Eichhorn, Bopp, and the brothers Grimm, of Schlegel and Hegel furnished invaluable material for an historical approach to economic subjects. Besides, the evolutionary viewpoint was rapidly making headway. The biological aspects were worked out by Lamarck and Agassiz, Alexander von Humboldt and Erasmus Darwin, whose son Charles started on his memorable voyage aboard the "Beagle" in 1831. In 1855 H. Spencer and A. Wallace announced some of the ideas basic to all evolutionary thinking, and four years later appeared Charles Darwin's "Origin of Species," the result of thirty years of research in many climes.

Economic Historism was an offspring of this larger movement for a dynamic interpretation of life, though it may and has been denied that the example of the German jurists Eichhorn and Savigny exercised any

direct influence over it.[26] The idea of a change of beliefs or of institutions, and of the environmental basis of all theory did not at any rate have to be taken from the German professors either at Gottingen or elsewhere, for as shown the data had long been accumulating on the continent, and to a certain extent in England. It remained only to organize various reactions against the static Utilitarian or Naturalistic economics into a creed at once intelligible to the general public and satisfactory from a methodological standpoint. And this the Historical group of German economists undoubtedly tried. They improved vastly on the half-historical attempts of Galiani,[27] the critic of the Physiocrats, and of later French writers like Ganilh.[28] They profited by the Romantic school of literateurs and philosophers whose fervid devotion to things medieval has a parallel only in the philological field where laws of growth and semantic changes gave a new meaning to modern language. Roscher,[29] the acknowledged pioneer in economic Historism, credits German economists like Krause, G. F., Rau, H., Baumstark, E., and Schmitthemner, F., with the initial move toward the new construction.

Friedrich List, whose "National System of Political Economy" came from the press in 1841, but was conceived and planned during the preceding decade, was an advance agent for the Historical cause, fortifying his arguments for nationalistic economics and commercial

[26] For instance by Menger, C., in his Untersuchungen über die Methode der Sozialwissenschaft, 1883, pp. 209-12.

[27] Dialogues sur le Commerce des Blés, 1770. Galiani was Neapolitan minister at Paris.

[28] Inquiry into the Various Systems of Political Economy . . . , one of the first topically arranged histories of economic thought, with critical commentary on A. Smith's Wealth of Nations, edition of 1812, transl. by Boileau, D.

[29] Grundriss zu Vorlesungen über die Staatswissenschaft nach Geschichtlicher Methode, 1843.

protection with innumerable references to past theories and practices.

He opens his book with a survey of economic developments in different European countries, and is not ignorant of economic doctrines from Mercantilism on. "History teaches us," he says, "how nations which have been endowed by Nature with all resources which are requisite for the attainment of the highest grade of wealth and power, may and must—without on that account forfeiting the end in view—modify their systems according to the measure of their own progress. . . ." [30] Cosmopolitanism and Malthusianism both were rejected as untrue to facts. The historical criterion was definitely brought forward as alone adequate for sound economic analysis. "The present state of the nations," we read, "is the result of the accumulation of all discoveries, inventions, improvements, perfections, and exertions of all generations which have lived before us; they form the mental capital of the present human race. . . ." [31]

As happens so frequently then, in this case, too, credit is given to the wrong man. There is not a great deal in Historism that List had not presaged in his modest, though enthusiastically received, plea for German industrialism. Utilitarian universalism, materialism (in the ordinary sense, meaning egoism and indifference to the higher non-economic values of life), individualism and narrowness of treatment,[32] these were the defects mainly attributed by Historism to the current economic system, and these List pointed out several years before Roscher published the first part of his "Principles of Political Economy" in 1843. We are told of economic stages from hunting to machinofacture, of the interrela-

[30] Translation by Lloyd, S. S., edit. of 1904, Book I, ch. 10.
[31] Ibidem, Book II, ch. 12.
[32] Ibidem, Book II, ch. 15, beginning.

tion of all social events, of the absurdity of wealth-measurements from an individual viewpoint only, of the difference between rights to income and concrete wealth, of the priority of public over personal rights, of the need of inference from the facts of life, the best book on economics being "actual life," and of the necessarily national character of doctrines, be they economic or not. Commercial restrictions, for instance, are to List "not so much the inventions of mere speculative minds, as the natural consequences of the diversity of interests, and of the strivings of nations after independence or overpowering ascendancy . . . and therefore cannot be dispensed with until this conflict of national interests shall cease, in other words until all nations can be united under one and the same system of law." [33] Again, the British system failed because "at bottom it is nothing else than a system of the private economy of all the individuals of the whole human race, as that economy would develop and shape itself under a state of things in which there were no distinct nations, nationalities, or national interests—no distinctive political constitutions or degrees of civilization—no wars or national animosities. So it is nothing more than a theory of values; a mere shopkeeper's or individual merchant's theory—not a scientific doctrine showing how the productive powers of an entire nation can be called into existence, increased, maintained, preserved—for the special benefit of its civilization, welfare, might, continuance, and independence." [34]

Doctrines of Historism.—Here certainly we are reminded of facts that Historism later built into systems of *national* economy. Economics by Roscher, Hildebrand,

[33] Ibidem, Book I, ch. 10.
[34] Ibidem, Book III, ch. 31.

Knies and their followers up to the dawn of the present century was grounded on the principle of historical continuity and repetition. It became the "science which has to do with laws of development of the economy of a nation." [35] It blossomed out into a philosophy of history in which successive stages of economic organization and living were to divulge the secrets of social life.[36] Like socialism Historism reckoned by epochs, the economic data of each providing the key to the solution of many other, if not all other, problems. And more particularly, as Knies put it in his "Political Economy from the Historical Standpoint" (the first edition of which appeared in 1853): "The historical interpretation of economics rests on the belief that economic theory is a product of development, is intertwined with the whole social organism of any given time and place and its circumstances, gets its arguments from the historical background, leads to periodically changing solutions—though it is a progressive manifestation of truth—remains imperfect in sum and character, and always, even when accepted as absolute truth, illustrates merely the general historical principle of the spirit of the times." [37]

In this vein Leslie, the Irish economist, could write: Only the historical method can reveal laws of evolution. "Every successive phase of social progress presents inseparably connected phenomena to the observation of the economist, jurist, the mental, the moral, and the political philosopher." [38] With impressive unanimity the Histori-

[35] Roscher, W., Principles of Political Economy, transl. by Lalor, J. J., from the 13th German edition, vol. 1, ch. 2, § 16.

[36] See Hildebrand, B., in Jahrbücher für National Ökonomie und Statistik, for 1863, vol. 1.

[37] Pages 24-5 of Politische Ökonomie vom Geschichtlichen Standpunkt, 1881-83.

[38] Leslie, Th. E. C., Essays on Political Economy, pp. 189-90. See also Schoenberg, G., Die Volkswirtschaft der Gegenwart, 1869, p. 38. For a recent attempt at a summarizing of the essentials of human history see Loria, A., Economic Synthesis, transl. by Paul, M. E., 1914.

cal group in England, Germany, and Italy agreed on these fundamentals of economic analysis. Centuries of history were to show what introspective psychology could not.

Historism thus took a sociological view of human nature. It declined to rest content with speculations privately conducted. It looked for a unit larger than the individual and found it in the society of all ages. Saint Simon and Comte had first used this conception for the elaboration of a theory of progress. The latter especially had emphasized the force of ideas as opposed to man's subjection to physical environment. He that left psychology and economics out of his classification of sciences was most instrumental in having them recognized as essentials for his own science, sociology! Society, he taught, was a single unit reflecting in its laws of statics and dynamics the Newtonian laws of motion. Nothing could be plainer than that the heterogeneity of events was reducible to homogeneity of law. For were not all parts interdependent as in an organism? Was not society really a body politic as Aristotle had divined and Hobbes picturesquely described it?

The organic nature of society and of the state seemed to find support notably in statistics as developed about this time. From small beginnings in the previous century this branch of investigation had grown to large proportions due directly to official records and indirectly to individual speculations on probability and law. The studies of Fermat and Bernouilli were supplemented by such works as Laplace's "Philosophical Essay on Probabilities," 1814, and Cournot's "Discourse on the Theory of Chance and Probability," 1843. The Italian economist Gioja had in 1826 published his "Philosophy of Statistics," and A. A. Knies in Germany his "Statistics as an Independent Science" about the middle of the nine-

teenth century. Governments had established statistical bureaus with more or less well-defined duties, methods, and machinery for work; and in the genius of La Grange, Gauss, and the Belgian Quetelet the statistical method found authoritative expression that economics was not likely to forget. Wagner indeed, one of the foremost German economists of the later Historical group, opened his professional career with a book on "Regularity (Gesetzmässigkeit) in . . . Human Actions," 1864.

But it was Quetelet who gave the science of statistics —if one may for the moment grant the possibility of such a science—a solid foundation. His "Treatise on Man," 1835, was translated into German as early as 1838, and into English in 1842. His "Letters on the Theory of Probabilities" cause widespread comment, and his "Social System and the Laws Regulating it" appeared in German dress by 1856. He chose as his life work the inquiry into those "causes, whether natural or abnormal, which influence human development; to endeavor to measure the influence of these causes, and the mode according to which they mutually modify each other." [39] He felt that economics might deal with human regulations designed to further progress, but that social physics, i. e., sociology and statistics, would voice the wish of God, no matter what the nature of disease or crime. For "moral phenomena, when observed on a great scale, are found to resemble physical phenomena," [40] and society, "this vast body, exists thanks to laws of nature like everything else from the hand of the Great Creator." [41] He insisted that society "is as much a piece of physiology as individual man himself." [42] Regularity therefore had a reason in facts of analogy as well as a

[39] Treatise on Man, transl. into English in 1842, p. 8.
[40] Ibidem, Introduction.
[41] Lettres sur la Théorie des Probabilités.
[42] Ibidem.

source of verification in a science of averages whose accuracy would be the greater, the larger the number of events taken into consideration.

Now this idea of interaction at all points, of law superseding freedom of will as ordinarily understood, served Historism in good stead, giving a semblance of truth not only to the organic theory of society, but also to the contention that economics was an inseparable part of sociology. We find therefore Roscher declare in his "Principles of Political Economy": "Our task is, so to speak, the anatomy and physiology of social or national economy." [43] The physiological viewpoint necessitated an inductive method and justified a reliance upon statistics. In Knies the same idea of an immensely complex process of interactions between individuals recurs again and again. Society as an organism whose unity every scientist should respect is contrasted, in the words of Hildebrand, with "the atomistic view of human and civic bodies" [44] which utilitarian economics made the basis of its speculations. In reality society is both more and less than the sum of individuals composing it; it would depend upon viewpoint and classification of essential traits.[45] To narrow down economics therefore to a science of exchange relations within a larger field, all of which was traversed in different directions by the members of society, seemed to men like Leslie Stephen,[46] Ingram,[47] L. v. Stein,[48] and Schmoller,[49] a vain attempt at dodging responsibilities. Economists were but cheat-

[43] Lalor's (J. J.) translation, ch. 3 of Introduction.
[44] Nationalökonomie der Gegenwart und Zukunft, pp. 29-30.
[45] See also Knies, K. Politische Ökonomie vom Geschichtlichen Standpunkt, 1883, pp. 24-5.
[46] See e. g. his The Sphere of Political Economy, one of the addresses reprinted in his Social Rights and Duties, 1896 (Swan, Sonnenschein & Co.), vol. 1, p. 105.
[47] Ingram, J. K. History of Political Economy, 1888, ch. 7.
[48] Lehrbuch der Nationalökonomie, 1886, 3d edit., p. 4.
[49] Grundriss der Allgemeinen Volkswirtschaftslehre, 1901-04, vol. 1. See also Ely, R. T., and collaborators in Outlines of Economics, 1909, p. 12.

ing themselves out of treasures rightly theirs, if they broke away from sociology. The forces of nature, of human nature in this case, would mock the specialist's rules.

But since unity was the most striking feature of all social life it became furthermore necessary to combine ethical with matter of fact judgments.[50] It was entirely out of the question to record calmly what was happening and why, as though laws eternal would allow no deviation from the customs of the moment, and then to base policies on them regardless of moral values. Historism took exception to the notion that a mere distinction between things as they are and things as they ought to be eliminated the latter out of the economist's program. The original Utilitarian view that the "economic man" was at the same time moral, and inevitably so because the pursuit of pleasure is the only test of a love of virtue, was never fully understood on the continent, or at least not among the economists. So here was one point of dissension to bear in mind. However, in the second place, Historism was essentially an ethical movement descended from German transcendentalism in psychology, logic, and ethics. Empiricism was not supposed to provide an answer to questions of the Is and Ought. It was agreed among the Historical writers that ethics has a task of its own, and may impose its standards upon others just as surely as economics might counsel the legislator. Indeed it was argued that applications in economics had no real standing until moralists approved of them. Without exception the plea of Historism was for an ideal of progress, for the acceptance of a moral norm, for the subordination of economic principles to

[50] For evidence see works just mentioned, and also Schmoller's (G.) paper on the Idea of Justice in Political Economy, in Annals of the American Academy of Political and Social Science, 1893-94, pp. 697-737.

the Absolute in ethics, that contrasted strangely with the easy optimism of Naturalistic and Utilitarian economics.

The difference arose mainly from two causes. For in the first place human nature was less simple to the Historical group than to their predecessors; and in the second place types of men were distinguished so as to account for the antagonism between individual and society. The divergent interests had to be reconciled somehow. It could be done by wise management of human nature and physical resources. But it seemed folly to trust everything to personal enterprise, as if in each man there was a rough balance of good and evil, whose aggregate effects would be conducive to order and progress. Historism saw differences between men as the eighteenth century had not seen them. It relied more upon moral teachings and public control, and less upon innate goodness or Divine Providence.

At the same time it was acknowledged that human selfishness was less imperious than the Benthamites had tried to make out. The differences in motives were shown to be so great as to preclude their reduction to one or two. Desire for wealth in particular was given less prominence than perhaps even the casual observer would have liked. The hedonistic premises were scouted as being phantastic and unjust to man. Most of the methodological essays of Historism, in England as much as in Germany, dwelt on this superficial analysis of the human mind. It was held that either the Utilitarians did not want to know human nature, or else that they were carried away by the spectacle of business men seeking forever least pain for most pleasure, as if that were all they thought of. In other words, man once more was credited with many aptitudes and designs, only a few of which the

older economics had considered in its quest for universal laws.

The "Socialists of the Chair" in Germany, whose logic and nomenclature was not Historical, but whose ethics blended nicely with that of Historism, seconded this move for a moral regeneration of their science. In fact, their outlook in noteworthy respects resembles that of a Roscher and Schmoller, for one thing because they stressed the relativity of economic truths from the historical and the logical standpoint, and for another thing on account of their nationalistic temperament. Wagner, Brentano, Cohn, Conrad, Held, and Neumann are names ever to be associated with Historism, even if Utilitarian and Marginal concepts found a place on their analysis of price. It is characteristic, e. g., that Wagner in his "Outlines of Political Economy," 1892, classifies human motives into egoistic and non-egoistic, subdividing the former as follows: first, the desire of wealth and the dread of want (poverty); second, fear of punishment and hopes of reward; third, love of approbation and of power; and fourth, wish for something to do—what in the phrase of Veblen would amount to "instinct of workmanship." [51] In such analysis of human traits, in the emphasis of legal relations as a postulate for economics, in a high regard for the stuff-aspects of wealth, in the inclusion of consumption as an integral part of economics, —in these and other points Historism had excellent spokesmen among the founders of the "Verein für Sozial-Politik." Both tried to forget the psychological roots of British Utilitarianism; both aimed at a dynamic interpretation of social events; both wanted education to change the organization of production; both assigned to

[51] Grundlegung der Politischen Ökonomie, 3. edit., vol. 1, p. 87.

the State duties that Manchestrianism had considered worse than futile.

Historism in particular dwelt on the importance of public control because through it Germany was expected to recover from the blows of the Napoleonic period. At the beginning of the nineteenth century Germany was no farther along the road of industrial reorganization than England at the time of the "Wealth of Nations." The need of an awakening was felt by discerning folk everywhere. A cry went up to bring the fatherland back to its days of glory and might. The middle classes labored as strenuously for a firm policy at home and abroad as the lower classes pinned their faith in the downfall of capitalism. The utopian and socialistic waves went over the land, welcomed as a deliverance from the adamant laws of Utilitarianism. The masses cared little for nationalism as long as capitalistic pressure kept them down. The leaders of scientific socialism not only scorned petitions for redress, or measures for national aggrandizement, but condemned the whole social order which was to be saved by this appeal *ad hominem*. No nationalism, was their slogan!

Against this kind of corruption, then, Historism sought protection in strong internal policies. Not only that Laissez Faire had proven a partial failure in England, not only that Smithian arguments rested on assumptions inadmissable by modern psychology, not only that the historical view suggested a change of front whenever conditions and aims changed, but also that centrifugal forces within German borders had to be watched if race and righteousness were to survive. Hence Customs Union and paternalism went hand in hand. Hence the fiasco of the stormy days of 1848 cheered men both of liberal and of conservative temperament. Hence

the solicitude of Historism for a peaceful, well-balanced plan of welding the hostile classes into one great nation. Proletariat and plutocracy were to join in a nation-wide campaign for the unification of all German peoples.

From Roscher on this concern for the national aspects of economics became noticeable and achieved results familiar to the outside world. It was Roscher who thought that economics "inquires how the various wants of the people of a country . . . may be satisfied; how the satisfaction of these wants influences the aggregate national life, and how in turn they are influenced by national life." [52] In his opinion, as in that of all his successors, "goods are anything which can be used whether directly or indirectly, for the satisfaction of any *true, or legitimate* [italics mine] human want, and whose utility, for this purpose, is recognized." [53] That is to say, utility was not anything whatsoever capable of gratifying any want, as the Utilitarians asserted, but something administering to wants socially warranted. A test was to be applied that a purely descriptive science had no room for. And so with regard to most definitions propounded by English economics. A national end was always kept in view. Economics, as O. Stein put it in his "Past, Present, and Future of National Economy," was primarily "a study of the maintenance and development of national productive powers." [54] Science and art were fused in one single study. Premises consequently must harmonize with standards of public welfare. Private property could not be an unlimited right to use, buy or sell wealth as the owner saw fit. Hypothetically it provided a basis for economic analysis, but where advis-

[52] Principles of Political Economy, vol. 1, p. 99.
[53] Vol. 1, ch. 1, § 1.
[54] Page 18 of Vergangenheit, Gegenwart und Zukunft der Nationalen Wirtschafts-Politik.

able it had to be regulated under common law. In this way Knies and Schäffle, Hildebrand and Stein and Wagner proposed to ward off the revolution plotted by the sponsors of the Economic Interpretation of History. For national grandeur was decidedly preferable to the sentimentalism of the socialists.

The query may finally be put: If such was the general drift of Historism, how did it propose to find the laws expressive of progress and prosperity? And the reply can only be: No new method of research developed out of all this opposition to Utilitarianism. Hildebrand, like Schmoller fifty years later, essayed valiantly to expound a new logic for old problems, but stopped in the middle of his discourse. Opuscules of much merit were written in England, but nothing to match either the scope or depth of the Utilitarian logic. Leslie and Ingram dwelt long on the defects of the opposite school, but stuck to the traditional views on in- and de-duction, on modes of reasoning, and the limits of experimentation in the moral inquiries. Roscher was admirably clear in his presentation of the historical viewpoint, so far as it contrasted with the static, or with the Utilitarian idea of human nature, but had nothing to put in place of Mill's "Logic." Knies was no logician, and made no pretense in his later years of having founded an "historical method." Hildebrand kept silent on this moot point. Schmoller's "Fundamental Questions on Law and Social Economy," 1875, served a particular occasion and nowhere penetrates the surface of things. Treitschke is pilloried, but the rest is negligible. Schaeffle might have been expected to speak a weighty word on the subject, but apart from general remarks nothing in his ponderous tomes bears on method. No psychology of reasoning was attempted. No logic was deemed essential to the defense of Historism. If it

proved to be anything other than a critique of Utilitarianism, it was a philosophy of history, but one neither as comprehensive nor as profound as Comte's or Hegel's.

The real question for Historism was in fact not very lucidly stated, though it took up a great deal of space in its literature. And this was the question whether human nature was to be assumed as changing with its physical and economic environment, or whether it was substantially constant? Or to bring out another side: Could the Utilitarian and Naturalistic economics give us the whole of human nature, or was there something that only a long-time view revealed, according to our ability to see and our patience in waiting for the data? That is, Historism was indirectly, though not in so many words, asking whether economics revolves about instincts or about experience post-natally acquired. In the former case psychology might supply all the requisites for a science such as J. S. Mill believed in when his "Logic" was first planned; in the latter case Comte had more to offer than Hume or Bentham, the natural outcome being a restatement of the Smithian doctrine.

Now, Historism was emphatic in reminding us of the complexity of human nature and social processes, the number of variables being conceived as too vast for any marshaling into brief formulæ. The universalism of the Utilitarians therefore was rejected, and the field of economics as a science enlarged so as to embrace all social facts.[55] But it needs only a perusal of the leading Historical treatises to see that their methods remained the old. The contribution of Historism consisted in its general viewpoint and shifting of stress where many facts had to be compared and weighed; but its economics,

[55] See for instance Ingram, J. K. The Present Position and Prospects of Political Economy; and Dillon, W. The Dismal Science, 1882.

strictly speaking, is either Utilitarian in details, or simply economic history. No such precise economic laws as the Ricardians had formulated were found. Deduction was retained in much of the descriptive work, and where the past was used to illuminate an abstract question of economic science, deduction figured as conspicuously as induction. For very good and sufficient reasons nothing else was possible.

Statistics, to be sure, were also requisitioned to add their mite to the larger fund, but few claimed to have discovered fundamental principles by that route. Knies himself confessed that history gave only analogies which could not, in the long run, take the place of deduction. Indeed, the more one observed the complexity of human nature, the less permissible was a reliance upon statistics for the elucidation of economic laws. For correlations were never exactly the same; nor was there the excuse of singling out specific traits on the ground, dear to the Utilitarians, that the plain-pleasure experiences are the commonest of all. Leslie was correct in saying: An economic law is "a function of so many independent variables that it must be complex beyond all conception if it takes them all into account; while it must yet be necessarily inaccurate if it does not take them into account." [56] In such a predicament, what was the student to do? Believe in economics, or abandon it for sociology, hoping thus to find a way to truth? Historism, to be consistent, had of course to decide for the latter.

For this reason Historical economics partakes of the nature of a sociological survey. We are transplanted back, so to say, into the Kameralism of an earlier period where all facts are grist to the economist's mill, and amplitude makes up for dearth of laws, for lack of neat-

[56] Social Rights and Duties, vol. 1, p. 104.

ness in the weaving of constant relations. In Roscher and Schmoller this breadth of treatment is impressive and refreshing, particularly after a perusal of Senior or Ricardo or Cairnes. On the whole, however, Historism did not excel either Say or Rau or Mill, to say nothing of weaknesses precisely where those writers were strongest. Historism, in short, brought with it an imposing erudition, unusual breadth of view, new light on socio-economic subjects, scholarly monographs by the score whose pages will always testify to the industry and conscientious accuracy of their authors, keen criticism at times on sociological thought, an inspiring ideal of progress and moral responsibilities, a better understanding of government and law in their bearing upon economics and vice versa, attempts at correlating production and physical environment, or income and levels of living, and finally a study of certain consequences due to an individualistic norm of productivity and capital whose significance had not been lost to earlier writers like Lauderdale and Rae. In all these points, including an ambitious scheme for utilizing knowledge in a paternal type of public control, the advocates of the Historical principle did better than their predecessors.

It was a question only whether, in achieving such things, economics had not lost its standing as an exact science; whether the original intent was not lost over a desire to obtain speedy results. If economics was to resemble natural science and mathematics, where reasoning had netted knowledge of the most reliable sort, it would have to take counsel with itself. Many at least were disposed to see it that way. Once more the revisionists had a clear track, if Historism fell short of its mark. For the second time it seemed necessary that economics return to older ideals, to premises which a theory of progress could not sanction.

CHAPTER SEVEN

MARGINISM

I. Premises

Marginism Defined.—The term Marginism has been applied to the doctrine which branched off from Utilitarianism and Historism beginning about 1870. As the word is now understood, and as it for that reason will here be used, it means the explanation of exchange values by states of feeling and of consciousness in general, but especially also the use of least ("marginal") fractions as a standard for determining the value of aggregates. Again, marginism differed from the earlier economic systems in that it compared units of *want and feeling* instead of *things*. Even in measuring productivity the standard was one of differential values psychologically determined, although deviations were now and then tolerated for the sake of a particular argument. However, it is not at all impossible that this difference between objective measurements of price through labor-time or expenses, and subjective measurements of price with the aid of an intellectualistic theory of feelings and demands, will be considered less momentous in the future than to-day. For on the one hand, Marginism has much in common with both Naturalism and Utilitarianism; and on the other, hedonism is only one feature in the Marginal philosophy.

The immediate occasion for Marginism was the

breakdown, in various parts, of Utilitarianism. It had become apparent by the middle of the nineteenth century that the Ricardian scheme could be maintained only at the cost of empirical truths. The world without did not bear out what abstruse thinkers demonstrated so ably. Too many qualifications, amplifications, rectifications, and even contradictories had slipped into the treatises that started with the psychology of Bentham and Mill!

Historism however, it was soon realized, could not fill the void either. For while it did good yeoman service in pressing the enemy back, in opposing static with dynamic concepts, it could not claim the field permanently. The kernel of truth in its argument was recognized and acclaimed by many who took long-time views of events, desirous of a moral solution of economic questions. But the hope—if any had entertained it at all—of discovering laws historically or statistically was soon given up. Nothing, it became evident before long, could be done if vast masses of material had to be turned over for purposes of induction. If Utilitarianism had made the work too easy, the Historians had made it unduly complicated. Only a prolonged sociological study could have satisfied men like Knies and Schmoller. Hence, while as a correction of older deductions, of economic generalizations whose fallacy external conditions and policies increasingly revealed, the Historical movement had scored a certain success, as a program for reconstruction it had failed. The question remained: What was at the root of the Utilitarian decadence? What must be done to protect economics against an *art* of "political economy?" How much could be retained of the old, and where lay the means for its development into a science comparable with physics or mathematics?

Marginism was the answer to this question. The Mar-

ginal doctrine turns on a few fundamentals, largely taken over from Utilitarianism, but in part peculiar to itself. For to begin with, the concept of an "economic man" and of hedonism in general was accepted as an indispensable, unassailable fact for the purposes in hand. In the second place, the entrepreneur standpoint, tentatively adopted by Smith, but consciously cultivated first by the Utilitarians as the only one compatible with a pretense to an "exact" economics, continued to predominate, sometimes to be sure under protest because of its apparent one-sidedness and menace to morality, but on the whole with the approval of those who held system higher than sentiment.

But on the other hand Marginism replaced the objective view of the Naturalists, Utilitarians, and Historical group by a subjective one, the source of value being found in men and not in materials. Back of things, they said, lay thoughts, and these latter must furnish the key to the problem that all other systems had practically left unsolved. So wants and ideas took the place of wealth and objects in the concrete. Totals and their changes were referred to least doses in successive additions or subtractions of wants and values. Ratios dealt with feelings, but not with units of goods. Or rather, these latter were reduced to units of the former, the differences between feelings or preferences, between efforts or sacrifices, serving to explain ratios of supply, rates of output, and shares of income as originating within the exchange régime. This reckoning of everything, of prices and incomes, of wealth and of capital, by differentials and margins psychologically measured, is the quintessence of Marginism. It was, in a brief phrase, a theory of least values and productivities, based on premises and

definitions for the most part originating in Utilitarianism.

Subjectivity of Value.—The notion of subjectivity however is much older than Marginism. It was mentioned, now vaguely, now definitely and with emphasis and purpose, by a host of writers before Jevons announced his discovery to the world. Condillac, e. g., in his "The Interrelation between Commerce and Government," 1776, showed that without want there can be no value, that imagined scarcity is as important in price-determination as real scarcity, that utility is not something inherent in things, but imputed to them by man, *wherefore* manufacture was as truly an act of production as agriculture; and he furthermore pointed to the differential preferences among men for one and the same thing or for different things as the proof of advantage in trading. No essay of like scope went deeper into the subject of value and exchange. Few of his contemporaries spoke so prophetically on an old topic that even then seemed exhausted!

But particularly after his time was the personal aspect of value brought out both in Germany and in England. Thus Hufeland in 1807 wrote: "All goods are goods only because of our conception of this utility in them";[1] Thompson in 1824: "The desire removed, no labor will, except by compulsion, be employed upon the production of goods";[2] Jennings in 1854: "Value is an attribute ascribed by man to objects from a remembrance of their services in the past, and conviction that such services are still available";[3] Courcelle-Seneuil in 1858: "Utility of an object lasts as long as our opinion of it; that is, it is

[1] Quoted by Roscher, W., in his Geschichte der Nationalökonomik in Deutschland, 1874, p. 658.
[2] Principles of the Distribution of Wealth, 1824, p. 12.
[3] The Natural Elements of Political Economy, pp. 72 and 202.

above all subjective";[4] and MacLeod in 1872: "Value, like color and sound, exists only in the human mind. There is neither color nor sound nor value in nature,"[5] the question thus arising: "If labor is the sole cause of value, what is the cause of the value of labor?"

MacLeod, to be sure, published his "Principles of Political Economy" a year after Jevons' "Theory" had been published, but certainly the question, *why* labor had value, was nowhere put so bluntly; not by Lauderdale nor Lloyd,[6] nor Baudrillart who in "The Relation of Ethics to Political Economy,"[7] 1860, simply made a distinction between utility in things and values created by man, following Storch in this regard. Courcelle-Seneuil came the nearest to a marginal interpretation of price in that he defined it as a balance of wants, and virtually did away with objective costs. In other words, he adapted J. S. Mill's statement to a subjective viewpoint, so that preferences took the place of differentials in cost. Lloyd in his lecture on the "Notion of Value," 1833, differentiated between absolute and exchange value, associating the former with valuations independent of exchange. The importance of scarcity for economic value, the rise of value with decreasing supply, and the principle of illimitable wants due to the diversification of products—all these now familiar ideas gave a touch of novelty to Lloyd's treatment. Similarly Banfield[8] in 1844 dealt with the effects of variety in our scaling of wants. However, one must go to Jennings and Gossen, and the better-known treatises of the seventies to appreciate the drift of Marginism in its earlier stages.

[4] Traité, vol. 1, pp. 45 and 243. See also Book I, ch. 8 passim, where the effect of differential wants on trade is succinctly stated.
[5] Principles of Political Economy, 1872, vol. 1, ch. 5, Sect. II, §§ 9-16.
[6] Lloyd, W. F. On the Notion of Value, 1833.
[7] See especially pp. 244-57 of Des Rapports de la Morale et de l'Economie Politique.
[8] Banfield, J. E. Lecture on the Organization of Labor, 1844.

Jevons thus writes: Utility is an "abstract quality whereby an object serves our purposes and becomes entitled to rank as a commodity";[9] Menger in his "Principles of Economics," 1871: "The essence of value as well as its measure is entirely subjective";[10] Wieser in 1884: "Value is an instance of human interest, but associated with a condition of things."[11]

Between 1855 and 1875 Marginism was definitely formulated as a theory of price and income, all subsequent developments resting logically on the foundation laid during those two decades. As Table Three shows, there was from the start considerable agreement among the founders, although differences become noticeable at closer range.

The Founders of Marginism.—What the five writers grouped together in this tabulation had in common was a subjective view of value, a stress of the law of diminishing returns and of the relation between scarcity and value —what Wieser was pleased to call the "paradox of value," —the relation of trade to differences in want-intensity as between different persons or with regard to different goods for any one person, the measuring of price by least wants respectively utilities, and the thought of connecting, at one point or another, prices with income. Emphasis was by all five put on price. The older notion of things and costs was either discarded or made to fit in with the psychological aspects of valuation. In general, the economic problem was stated more concisely perhaps than ever before, and deductive reasoning relied upon for expanding the argument.

[9] Theory of Political Economy, edit. of 1879, pp. 38 and 43. Jevons elsewhere informs us that his principal ideas were developed between 1855 and 1860.

[10] Grundsätze der Volkswirtschaftslehre, p. 119.

[11] Ursprung und Hauptgesetze des Wirtschaftlichen Werthes, pp. 79-93.

TABLE THREE

MAIN DOCTRINES OF THE FOUNDERS OF MARGINISM (1854-1874) COMPARED

Gossen, 1854	*Jennings, 1855*	*Jevons, 1871-79*	*Menger, 1871*	*Walras, 1874*
Work: A Treatise on the Laws of Exchange	Natural Elements of Political Economy	Theory of Political Economy	Principles of Political Economy	Elements of Pure Economics
Basis in Psych.: Indefinite	Hartley-Mill, Jas.	Bentham-Bain, A.	Indefinite	Indefinite
Method: Mathematical in Part	Expository	Mathematical in Part	Expository	Mathematical Chiefly
Main Points	*Main Points*	*Main Points*	*Main Points*	*Main Points*
1. Law of Diminishing Gratification at one use, or for habitual use	Law of Variation of Sensations at one use	Law of Variation of Utility at one use. Final vs. Total Utility.	Law of Diminishing Utility at one use	Law of Diminishing Utility at one use
2. Idea of Least or Final or Marginal Utility or of Rarity by dose, unit, or atom	Idea of Least or Final or Marginal Utility or of Rarity by dose, unit, or atom	Idea of Least or Final or Marginal Utility or of Rarity by dose, unit, or atom	Idea of Least or Final or Marginal Utility or of Rarity by dose, unit, or atom	Idea of Least or Final or Marginal Utility or of Rarity by dose, unit, or atom
3. Idea of Scarcity as condition to value, and of the "Paradox of Value" (Wieser)	Idea of Scarcity as condition to value, and of the "Paradox of Value" (Wieser)	Idea of Scarcity as condition to value, and of the "Paradox of Value" (Wieser)	Idea of Scarcity as condition to value, and of the "Paradox of Value" (Wieser)	Idea of Scarcity as condition to value, and of the "Paradox of Value" (Wieser)
4. Law of Fatigue	Law of Fatigue	Law of Fatigue		

5.	Equalization of labor-pain and of consumption-pleasure	Equalization of labor-pain and of consumption-pleasure	Equalization of labor-pain and of consumption-pleasure Marginal labor-pain as cost of production		
6.	Order of preferences for goods according to income-class	Different degrees of utility for different { persons / goods	Different degrees of utility for different goods	Different degrees of utility for different goods or persons	Different degrees of utility for different goods or persons
7.	Law of Equalization of marginal utilities for different goods or persons		Law of Equalization of marginal utilities for different goods, and for different uses of any one good	Law of Equalization of marginal utilities for different goods	
8.	Resulting advantages of trade, and balance of supply and demand		Resulting advantages of trade	Resulting advantages of trade	Resulting advantages of trade, and balance of supply and demand
9.			Law of Indifference for units of a homogeneous supply	Units of a homogeneous supply are interchangeable	
10.	Final utilities of pairs of goods fix price	Least utilities of pairs of goods fix price	Final utilities of pairs of goods fix price	Price moves between outer limits of marginal utilities of competing buyers and sellers	Relative marginal utilities of all goods in the market fix price of any one good

TABLE THREE (*Continued*)

MAIN DOCTRINES OF THE FOUNDERS OF MARGINISM (1854-1874) COMPARED

Gossen, 1854	*Jennings, 1855*	*Jevons, 1871-79*	*Menger, 1871*	*Walras, 1874*
		Market-price is an average of individual exchange-ratios Costs influence price through supply	Law of monopoly-price	
11. Classification of goods: Consumption, individual or complementary utilities; Production-goods in various stages; Bearing on capital and interest			Causal interrelation of goods: In consumption, individual or complementary utilities; Production - goods in various stages; Bearing on Imputation	
12. Durable goods have value of sum of their uses; Production-goods get value from their products			Goods of higher order (stage) get their value from goods of lower order	Production-goods get their value from consumption-goods, but through supply the former also affect the latter
12a. Value of factors in joint-products			Value of any one factor in joint-	

	is incalculable			production appears by elimination of respective factor	
13.	Rent is due to differential productivity of soil		Rent is due to differential returns, to diminishing returns, and to Law of Indifference		Rent varies with supply and demand of products involved
14.	Interest is a price		Interest is reward of abstinence, but measured by marginal productivity	Interest is due to impatience to consume	In statics there is no interest; but differential net profits are capitalized
15.	Wages reflect equalization of marginal utilities of goods		Wages vary with productivity	Wages vary with marginal productivity, measured by the method of difference	

Appreciable differences however existed and under the circumstances were to be expected. For Marginism had small beginnings like most things impressive for their size. No one economist developed a Marginal system in the way Smith or the Physiocrats may be said to have cast their system at a single molding. On the contrary, growth was not only slow, but its stages may be easily discerned in the several works on the subject. The original thought was to explain value by going back of things and ratios of exchange to ideas and rates of preference or satisfaction. Not special kinds of goods were covered by this analysis, but only goods in the abstract, the difficulties inherent in a measurement of, e. g., joint utilities not being fully understood. The identity of price and income was remembered from the outset, no doubt because Utilitarianism had long labored with this fact; but to follow it up into all the situations an imperfectly competitive exchange mechanism gave rise to was still another matter. Distribution again was not incorporated successfully into the pricing process until the end of the eighties, that is more than a generation after the first thorough treatment of marginal wants.

If we compare the viewpoints of the founders Gossen, Jennings, Jevons, Menger, and Walras whose works appeared between 1854 and 1874, we shall note in the first place marked variations in stress and method. Gossen, Menger, and Walras for instance said nothing of psychology, although it formed implicitly a basis for their reasoning. Jennings was the most explicit and careful in developing his psychological data, while Jevons made it clear from the beginning that Bentham and Bain had been his mentors. In the second place, the treatment was essentially mathematical with Walras and, in the price analysis itself, also with Gossen; but Jevons is readily

understood without his graphs, and Jennings and Menger use entirely a verbal exposition, the possibility of coördinates and correlations not being even suggested. Third, Jennings alone restricted himself to the valuation side of price, while the others made less of physiology and more of the exchange aspect of marginal wants. Walras particularly treated of equations of supply and demand, a topic which Jevons subordinated to his larger question of price and income, while Gossen and Menger made one forget their central problem over corollaries affecting economic policies or social reforms. Fourth, as regards questions of policy, all five founders proved individualists in theory, but friends of public control in practice. Thus Gossen and Walras discussed plans for the nationalization of lands or of rents, in order to provide cheap credits or high returns to the tiller of the soil. Menger reported favorably on interference by the State. Jennings moralized chiefly with the intent of improving on the brute struggle to which he was so unwilling a witness; and Jevons from start to finish took the keenest interest in any project on behalf of the masses. In fact, it would not be too much to say that Marginism was as paternalistic outside of its conceptual system as it was individualistic within it. Few economists have striven harder to give to the producer his share, or to raise by dint of concerted social effort under public supervision, the average man's level of living and thinking than the pillars of Marginism, whose abstractions dealt so brusquely with sentimental idealists!

Passing over now to details one must note a good many differences not perhaps important for the later development of Marginism, but instructive on account of the light they throw upon the inception of the movement. The following seem to deserve special mention.

Walras was the only one to interrelate the marginal utilities of all goods in the market, showing that these relative magnitudes helped to fix the exchange-ratio for any one good. He also eliminated *interest* from a static view of economics, and rejected the Ricardian idea of a differential rent dependent upon different degrees of fertility and the existence of no-rent soil. Second, the time-factor in the measurement of wants was ignored by all but Gossen and Jevons, who because of their mathematical training probably had a better idea of "functions" than the rest, while Gossen alone related diminishing satisfaction to periodic, habitual uses of a good by one and the same person. In all other cases the law, given different names, was illustrated from consumption at *one* particular moment. Third, the "paradox of value," though implied by all and at any rate Lauderdale and Say, was not always stated clearly, nor was it till Wieser wrote his "Natural Value," 1889, that the phrase served regularly to explain what labor theories of price couldn't explain. Fourth, the differential preferences for any one article by different persons was not expressly discussed by Jevons, while the differential satisfactions derived from any one material put to different uses, appearing in various concrete forms, seemed to him of obvious significance. Fifth, labor-pain was connected with pleasure-values by Gossen, Jennings, and Jevons, but not by the others. The first three, however, dealt with the question rather cavalierly, so that it would be wrong to ascribe to them the ideas since associated with Marshall, Wieser, Dietzel, and especially also American Marginists. Sixth, Menger as early as 1871 gave us a productivity-theory of wages and an agio-theory of interest, while Jevons accounted for interest on the grounds of yield

in concrete form. That Menger espoused the cause of time-preference even while reducing wage to a marginal contribution of labor may seem strange, but is undoubtedly the case. When treating of wages the Utilitarian or Naturalistic definition of wealth apparently decided; when pondering on interest the subjective view prevailed —a circumstance nicely illustrated in the tenacity with which Marginism pursued the general problem of interest and capital, making of capital a fund, instead of treating it as a special case of tangible wealth whose root could be nothing else than labor.

Seventh, Jevons was alone in emphasizing the difference between total and final utility, and in trying to justify the conception of price as the average result of many preferences competing at a sale. As the author of "Principles of Science," 1874, which even before that date engrossed his mind, he was not unnaturally persuaded to use a mathematical idea in explaining a psychological fact. Individual and aggregate were thus to be made comparable regardless of the fictitious nature of all arithmetical averages which none knew better than Jevons. Eighth, the bearing of total supply on individual ratings of value was overlooked by all but Walras, who however did not permit this discovery to mar the main argument of Marginism. Ninth, the problem of imputing exact values to individual items used jointly was boldly taken up by Menger and thus became paramount in economic analysis. Gossen however refused to deal with it because, as he felt, the complexity of the situation would make any satisfactory measurements impossible.[12] Tenth, the value of a classification of goods according to the stage they had reached in productive processes, or according to their joint or single use, was clearly recog-

[12] Page 27.

nized by Gossen and Menger, the latter particularly basing his pricing on it. The other three founders got along without it. They never attacked this special phase of the pricing problem, so did not need the distinctions made by the two Germans.

The differences in details however should not blind us to the general agreement among the five originators of Marginism, nor to the rapid development of their main theorem. What at first had looked like a harmless change of front, undertaken for the sake of reconciling value and wealth, eventually turned out to be the signal for an open revolt against the "classical" doctrines. Jennings started by showing the discrepancy between Bentham's hedonism and the measuring of values through cost, that is through inert matter. To him the first point was that goods became valuable in proportion to scarcity, and "because their future services are anticipated." [13] The law of the variations of sensations, as he called the law of diminishing utility, was all important because it made out of value a function of feelings purely within us.

Gossen by similar reasoning, though in different terms, arrived at the conclusion that "the price for every article is fixed at that point where the whole supply is sold." [14] But he also urged society so to distribute its productive powers and consumption goods that the marginal gratification of any good would at least counterbalance the greatest labor-pain incurred in the production of any unit of such a good.[15] Furthermore, though not in the direct line of economic thought, the following deductions made by Gossen on the strength of his principal theorem deserved mention: First, that the price level is determined

[13] Natural Elements of Political Economy, pp. 210-12.
[14] Entwicklung der Gesetze des Menschlichen Verkehrs, p. 95.
[15] Ibidem, p. 45.

by a sum, of which one factor is the product of the velocity of circulation multiplied by the amount of money circulating, and the other bank-credits, this sum to be divided by the volume of goods exchanged; second, that rural credits should be subject to central control; third, that differential land-rents might be used by the government to buy land with a view to renting it out at reasonable rates to the most efficient workers; fourth, that child labor should be prohibited and women given the same rights and educational facilities as men; and fifth, that science be used more liberally toward the application of religion to social questions.

Gossen, then, was a man of many ideas, and a worthy contemporary of Jennings. That both failed to make an impression upon their own age is due not to their inability to explain their novel viewpoint, but—we must assume—to the prestige and official standing of opposite lines of thought. Utilitarianism was at its height in the second third of the nineteenth century. The reservations that gradually came to mar its logical structure or its main arguments had not yet become obtrusive. Psychology itself had made appreciable progress even before 1870, but it was not studied by economists so as to either injure Utilitarianism or benefit a subjective approach to price analysis.

Menger and Jevons gained a hearing at once partly because of the controversy raised by Historism, and partly because of the skill with which Jevons made use of sensationalistic psychology in developing his marginal concept. Certainly it was significant and in a way fortunate that three men like Jevons, Menger, and Walras arrived almost simultaneously at the same fundamental opinion. For now there was a link provided between Austria, France, and England that could not but hasten

the dissemination of the new knowledge. Herbartian psychology and Fechnerian experiments were nowhere enlisted to strengthen the main argument. What counted was solely the common bond of a single subject for all three investigators, a desire to clear economics of certain inconsistencies that the early Ricardians had nothing to do with, and the hope, lambent in all three writers, that economics might fulfill its first promises, might be proven to constitute a true science, might yield precise results regardless of what nationalists and historians claimed to the contrary. Utilitarianism from a new angle, with slightly different stress of materials and methods, this was the aim of Marginism from the outset!

As a result of these first inquiries of the pioneers some decidedly fundamental propositions were laid down even before 1880, a fact easily overlooked when one labors in the midst of treatises written since that time. Walras, e. g., had said in his "Elements of Pure Economics," 1874: Effective demand is "demand of a certain amount of goods at a certain price," [16] and: "The demand or supply of each of the commodities (exchanged) by each of the traders is a function not only of the price of that commodity, but also of the price of all others. . . ." [17] Both Menger and Jevons used the idea of interchangeable units in a homogeneous supply of commodities or services,[18] a thought that lent a convincing tone to the general theory of imputation and could not well be dispensed with, whether stated in so many words or not. However, neither Gossen nor Walras mentioned the question at all, doubtless because of their special interest in the

[16] Elements d'Economie Politique Pure, 2. edit., p. 68.
[17] See an article of his in Annals of the American Academy of Political and Social Science, vol. III (1892), entitled Geometrical Theory of the Determination of Prices, p. 47.
[18] Jevons, W. S. Theory of Political Economy, 2. edit., p. 94. See also Menger, C. Grundsätze, ch. 3, § 2-3.

market side of pricing. In general, it must be admitted, Menger and Jevons went farthest in their attempts at an all-embracing price analysis, Menger for instance acting with this end in view when he carefully noted the difference between goods admitting of one use only, and such as might be used successively and to many different purposes. Suggestions for a measurement of putative amounts of a product due to any one agent were thus given from the start.

However, Jevons was no less a logician than the Austrian. Indeed, if anything he reasoned more formally and laid more facts under tribute to prove his point. In his "Principles of Science" of 1874 he traced out a system of logic at once comprehensive and bold. Deviating from J. S. Mill he regarded deduction (through substitution) as the arch-type of all forms of inference and showed the element of mere probability characterizing our knowledge. Probability to him was the core of scientific reckoning, and the average a most important concept. It was hence no accident that he pictured price as a resultant average of many individual and variable preferences competing in the open market. He never recanted his original theorem that economics deals with measurable quantities; but for this reason also the difficulties facing a conscientious economist were held to be great.

To state his position in a few words: "The final degree of utility is that function upon which the theory of economics will be found to turn." [19] "The last increments in an act of exchange must be exchanged in the same ratio as the whole quantities exchanged." [20] The price law is a "law operating in the case of multitudes of individuals which gives rise to the aggregate represented in the

[19] Theory of Political Economy, p. 56.
[20] Page 102.

transactions of a nation." [21] But still further, he sought to bridge the gap between the objective and subjective analysis of value, informing us that "articles will exchange in quantities inversely as the costs of production of the most costly portions, i. e., the last portions added." [22] And finally it was he also who set an example for a productivity view of interest in the words: "The interest of capital is the rate of increase of the produce divided by the whole produce." [23]

So far the founders of Marginism. What developed after 1875 may be stated in comparatively brief space so long as we have in mind only the essentials that became an integral part of the system. Contributions since then have come as much by way of criticism, especially during the last decade, as in direct and intentional furtherance of it. Marginism found few friends in France and Italy, unless one were to reckon all mathematical expositions as a proof of Marginism, a point difficult to defend. In Germany and England its reception was more cordial, yet even there not unmixed with misgivings. So it is in Austria and in the United States that Marginism may be said to have become lodged most firmly, in the former country from 1870 on, in the latter only toward the end of the century.

Economics in America.—American economics, like that of other countries, bore the marks of the environment in which it grew up. Prior to the Civil War moral philosophy was still the customary unit of study anent everything not natural science or mathematics. Chairs of economics hardly existed before 1870. Important contributions had been made by thinkers such as Raymond, Rae—whose influence however was slight for the moment,

[21] Introduction, p. 17.
[22] Page 203.
[23] Page 267.

—Carey, E. P. Smith, and Bowen, but without serving as a nucleus for a compact system except in the case of H. C. Carey. Carey was the outstanding figure in early American economic or sociological thought. His interests covered the whole realm of philosophical inquiry and enabled him to offer effective resistance to Malthusianism and Ricardianism when at the very pinnacle of their fame. John Rae, a Scotch emigrant, was the author of the "Statement of Some New Principles on the Subject of Political Economy, Exposing the Fallacies of the System of Free Trade, and of Some Other Doctrines Maintained in the 'Wealth of Nations' [of Adam Smith]," 1834. Few books of that time went more thoroughly into the relation of value to wealth, or of both to capital, or of all three to human progress. But nothing came of his labors for the time being. Henry George scored a victory with his "Progress and Poverty," 1879, yet it would be difficult to assign him a definite place either in American or in European economics as a science. His outlook was historical, but his superiority lay in the application of a single idea, taken out of earlier systems, to a popular question. As for the rest of the group that might be mentioned by name, they either built on English models, or else echoed the sentiments of Carey. The dominant interest was practical, a reflection of commercial policies, problems on taxation, public domain, currency and banking, as they existed during this period.

After the Civil War however the appreciation of abstract questions grew. The economic development of a nation blessed with unparalleled resources and teeming millions continually augmented from abroad gave rise to needs, to opportunities in leisure, that could hardly fail of expression in economic literature. Railroads and

steamships began to bind east and far west as stage coach or clippers skirting the coasts could not have done. Industry was put on a broad basis by the discovery of new natural riches, as well as by mechanical and scientific inventions largely due to native ingenuity. The "frontier" gradually was pushed out to the Pacific, so that a land problem might very well arise. Capital went into non-agricultural improvements mainly. A lion share went to public utilities, to mines, to factories, and to the development of city life. Congestion became more conspicuous along the eastern side of the Appalachians than sparseness of population in the Mississippi valley. Large scale production supplanted the former meager attempts at a supply of neighborhood demands. A proletariat emerged out of this industrialization of capital and energy, not so very different from what Europe had to grapple with, but possibly more self-conscious because of its youth and comparative well-being. Foreign policies still were a minor issue, but there was plenty to think about that might, directly or indirectly, turn on economic theory.

What is more, young men went to Europe to get a higher education or to finish their studies in special lines. Germany became a haven for many who sought light on sociological questions. And when these returned the material was at hand for university research at its best, in quantities that since then have revolutionized popular ideas on most things economic. Between 1885 and 1890 economics became a profession to which increasing numbers devoted their talent and time. In 1883 the Johns Hopkins University Studies in History and Political Science began to appear. In 1884 the American Historical Association had been founded. In 1886 followed the American Economic Association whose publications

have filled long shelves in the libraries. In the same year also the Political Science Quarterly was launched, and the next year the Quarterly Journal of Economics. In 1890 was founded the American Academy of Political and Social Science; in 1892 the Journal of Political Economy, and in 1895 the American Journal of Sociology. Thus within a very few years societies had sprung up whose labors found space in scientific journals, in book form, and in the daily press.

The prevailing tone of this American movement, if one may judge from its printed output, was at first historical and in a measure even paternalistic. The influence of German ideas was not shaken off in a trice. It was not likely that it would be. However, Anglo-Saxon ancestry counted ere long. The triumph of Marginism between 1890 and 1905 is excellent evidence for the impossibility of grafting Historism on to foreign stock. Though strong in Germany it was not after all capable of satisfying the demands of a newer and larger country where the past was short and the future so big with possibilities. Marginism made headway most rapidly where the Historical movement could not thrive: In Austria and in the United States, but not on German ground where metaphysics had so eloquently presented the present as merely a by-product of the past. As events have taught us, it was easy to pass from Utilitarianism to Marginism, but to convert the Historical group was a task attended with almost insuperable difficulties.

Marginism thus made progress in America, even though the believers in Historism or in a revised Utilitarian doctrine carried on their own work with undiminished vigor. All three phases were duly studied and incorporated in systematic treatments of economics; but Marginism was given most serious consideration.

In Austria the Marginal system received its finishing touches at the hands of Wieser and Böhm-Bawerk. By 1889 little remained to be done. In Germany all that was essential had been said by 1895, and in America by the end of that decade. The development in general followed the lines sketched out by the pioneers before 1875. The pricing problem was first solved so as to comprise all classes of goods, some services included. From a bare contrasting of costs and utilities the analysis went on to fix the price for each exchange of goods under conditions roughly true to facts. The distributive aspects were next discussed from various angles, the break with Utilitarian laws being gradual, though inevitable because of the subjective definitions which conformed strictly to a competitive régime. Exact measurements were aimed at and confidently undertaken as descriptive of principles universally valid. Exceptions were noted, but did not make serious inroads,—so it was held,—upon the main argument. Marginism as a static enterpreneur statement of value and distribution constituted the core of the science of economics. Applications were found for questions of public finance, of wage regulation, and a theory of consumption. All in all, progress was rapid and gratifying to those who thought of economics chiefly as a conceptual science, somewhat on the order of mathematics, the need of verification and an adequate methodology not appearing urgent. The abundance of treatises on Value and Distribution, or on Principles of Economics which pivoted mainly about a Marginal price analysis, is sufficient evidence of the esteem enjoyed by the new doctrine, in America fully as much as in the Old World.

Psychology of Marginism.—The strength of Marginism was for one thing its psychological basis which men like Jennings and Jevons took special pains to make clear,

but on the other hand also the superiority of Mill's logic over that of Historism. What Menger, the chief expounder of Marginal method, said in his widely read essay, was no great advance over the Utilitarian. Nothing was said on this subject by Marginists that could compare with the penetrating treatment of J. S. Mill. However, just because the one was for the most part a review of the earlier work (with slight changes here and there), Marginism won its case. There was no need of discarding the traditional methodology. Only Historism had to do that, and was so much the worse off for it. The Austrian school could adapt the approved deductive logic easily to its own ends, for like Utilitarianism it preached statics and competitive rights. The individual remained the unit of action and of values.

Again, it was not the German nation that gave Marginism a solid foundation in psychology. In this respect too the credit belongs entirely to England, the land of empiricism par excellence, and of innumerable volumes on Human Nature, on the relation of ethics to the emotions, of economic law to primal instincts. It was indeed symptomatic that Walras observed silence on this topic, that the Austrians barely alluded to it, and that in England it received careful consideration from the start. It would seem the very abundance of material there aroused a sense of responsibility, for had not the Utilitarians reverted again and again to those fundamental traits that governed all social phenomena?

The psychology of Marginism is British and not of the continent. In spite of the fact that Herbart had given new life to the "faculty"-psychology of the idealistic philosophy, in spite of the discoveries of Weber and Fechner, in spite of the predominance which Germany was to acquire in this field after 1870, economists turned

in England knowingly, elsewhere perhaps unwittingly, to the thoughts of Hume, Hartley, and the two Mills. Gossen and Menger made nothing of the psychological presuppositions with which they were working; nor did Walras in 1874. Jennings, on the contrary, hardly gets away from them, and Jevons accorded them a conspicuous place both in the first and in the second edition of his "Theory."

Hobbes deserves quoting once more, if only to show the antiquity of a fundamental thought in Marginism, or possibly one should say, in order to illustrate again how near great thinkers have come to novel ideas without fully realizing it. In the "Leviathan" he had written: "The value of all things contracted for is measured by the appetite of the contractors, and therefore the just value is that which they be contented to give." [24] That was in 1651. In 1785 Paley, the author of "The Principles of Moral and Political Philosophy," remarked that "pleasures by repetition lose their relish. It is a property of the [human] machine, for which we know no remedy, that the organs by which we perceive pleasure are blunted and benumbed by being frequently exercised in the same way." . . . "The truth seems to be that there is a limit at which these pleasures soon arrive, and from which they ever afterwards decline. They are by necessity of short duration, as the organs cannot hold on their emotions beyond a certain length of time; and if you endeavor to compensate for this imperfection in their nature by the frequency with which you repeat them, you suffer more than you gain, by the fatigue of the faculties and the diminution of sensibility." [25]

Jennings in his most stimulating "Natural Elements

[24] Edition of 1651, p. 75.
[25] Book I, ch. 6.

of Political Economy," 1855, acknowledged at once his indebtedness to men like Locke, Hartley, D. Stewart, Th. Brown, R. Whately, Carpenter, J. F. W. Herschel, and Jas. Mill. He deplored the indifference of economists to this crucial problem in their field, namely the problem of what psychology had really to say about wants and valuations. To him the social origin of values is self-evident and of paramount significance. "Human communities," he wrote, "are living organisms," [26] and nothing could be true of the individual but it must apply in large measure to social interrelations, the economic not excluded. Hence the need for an inquiry into the roots of human designs of which the Ricardians seemed so blissfully ignorant. Or rather, what the orthodox group took for granted should be explored lest false conclusions were drawn that might satisfy the requirements of a syllogism, but not the best reason of statesmen responsible for human welfare.

Jennings therefore restates the old Locke-Hartley-Hume-Mill theory of consciousness, deriving ideas from sensation and impressions from ideas in Hume's style, making of ideas copies of perception due to a sensation externally aroused. Of simple ideas compound ones are constructed. Association binds ideas into chains so that the re-arousal of any one link will entail the recollection of the other members in the series. Brown's contention that not only ideas, but feelings too are subject to this principle is greeted with applause as helping materially in the investigation. Feelings are *ideas* felt again, as they were once felt through primary sensation. The bulk of feelings consist of the category pleasure and pain. Feelings, like Hume's perceptions, vary in liveliness or intensity and duration, our idea of a former sensation

[26] Natural Elements, p. 61.

reflecting commonly such differences. Remembrances of pleasure engender conative forces, motives whose popular name is wish, wishes being the more intense the oftener their prototype has recurred, and the stronger the sensation. Man desires pleasure naturally; because of associations want and action arise even when the original object of desire is absent.

This Hartley-Humian view of consciousness, learning, and the emotions had been taken over by James Mill and rounded out into a comprehensive "Analysis of the Phenomena of the Human Mind," of which something has already been said à propos of Utilitarianism. Mill wrote among others the following significant passages: "All sensations are capable of being revived." [27] "An idea is the revival of a former state of feelings." [28] Ideas are feelings "which exist *after* the object of sense has ceased to be present." [29] Ideas of the causes on pleasurable and painful sensations are "never ideas of the causes separately, but ideas both of the causes and of their effects, inseparably joined by association. They are therefore always either pleasurable or painful, being complex ideas, to a great degree composed of the ideas of pleasurable and painful sensations." [30] "The anticipation of a future sensation is merely the association, the result of prior sensations, of a certain number of antecedents and consequents." [31] "A motive is an idea of a pleasure." [32]

Jennings not only understood these chapters of James Mill, but accepted them as true and applicable to his own economic intents. He followed pretty nearly the whole length of the argument, and then drew further

[27] Analysis of the Phenomena of the Human Mind, edit. of 1869, ch. 19.
[28] Ibidem.
[29] Vol. 1, ch. 2.
[30] Ch. 24.
[31] Ch. 22.
[32] Fragment on Mackintosh.

conclusions; such as that our penchant to save is the result of associating pleasure with production goods, although at the start man thought of nothing but the consumption good.[33] He inferred that pleasure leads to valuation, and this to desire, and this in turn to action or exchange. He wrote: "By memory, confidence in the future, comparison and abstraction, acting under the ever present influence of Combination [i. e., association]—the feeling of satisfaction eventually grows into the conception of value. . . ." [34] Prices had to vary with satisfactions. There was no alternative to this law. In short, Jennings' view was not that of the evolutionist who attaches race-preserving values to selfishness, but that of a thinking eighteenth century man who was groping for light on the problem of good and evil, respectively of valuations economic.

Jevons, in the important third chapter of his "Theory of Political Economy," expressed his sense of obligation to Jennings who had "most clearly appreciated the nature and importance of the law of utility," i. e., of diminishing satisfaction. It was a characteristic of Jevons to give credit to whom it was due, openly and generously. However, while Jennings undoubtedly influenced Jevons, particularly by his lucid presentation of the Hartley-Hume theory of consciousness which no other economist had previously applied with so much force to the question of value, the chief support of Jevons was Bentham. Hume and Paley, Banfield, the precursors of the mathematical group of economists, these and many French writers were cited in the "Theory." But the chief burden lay on Bentham and James Mill, the latter's "Analysis of the Phenomena of the Human Mind" having

[33] Natural Elements of Political Economy, pp. 189-92.
[34] Pages 181-82.

been given the benefit of A. Bain's comment. Through Jevons, in this manner, the Utilitarian psychology crept into the Marginal interpretation. With hardly an exception the Marginists admitted the hedonistic basis of their system. Without presenting it in detail, as Jennings and Jevons made bold to do, its real significance for the main argument was nevertheless recognized. The position of Jevons therefore has turned out to be a crucial one from the standpoint of methodology, although its larger aspects of course received more competent consideration at the hands of Menger.

Three main questions must be distinguished in the psychological problem as Marginism might have understood it, and often did understand it. The first was: How could sensations become wishes? The second: What was the means for measuring either or both? The third: Should the facts established be used for a theory of ethics? One cannot do better than to keep these three questions separate, for to the economist only the first two were of paramount significance. As it happened, to be sure, Jevons himself was a Utilitarian in the narrower sense who had "no hesitation in accepting the Utilitarian theory of morals which does uphold the effect upon the happiness of mankind as the criterion of what is right and wrong," provided one put "the widest and highest interpretation upon the terms used." [35] However, the majority of Marginists were not interested in this side of the matter. They disagreed with the Benthamites or even with J. S. Mill's essay on "Utilitarianism," yet remained ardent disciples of the viewpoint first developed by the five founders. But the vital fact is this, that one was not at all obliged logically to assent to ethical

[35] Theory of Political Economy, 2. edit., 1879, Introduction.

applications of hedonism, when making it the basis of an economic valuation.

Now Jevons did not consider the first question, viz., how could sensations become wishes, as fully as Jennings. He did not repeat the familiar argument of Hartley and Hume or James Mill, except in fractions here and there à propos of what was uppermost in his mind, namely the measurement of feelings. Jevons took it for granted that sensations are the root of all ideas, that ideas are either simple or compound, that feelings are necessarily of three kinds as Bentham had pointed out, and that emotions are aroused by ideas which themselves, just like feelings, obey certain fundamental laws of association. Feelings had to be either pleasant or disagreeable or indifferent, the former two being in an overwhelming majority. Through association it was possible, nay inevitable, that one could think of things not directly presented to the senses; and furthermore, the remembrance of a pleasant sensation could be linked up with an object not itself responsible for it. Means to pleasure, as eighteenth century empiricists had shown, could become ends by a process of transference of ideas.

What of wishes then? It was a commonplace among English psychologists that the re-arousal of an idea, say by association, brought with it an echo of the original sensation or emotion coupled with it. First perceptions could be restored in this way. Feelings were revived, and just as at the original experience an aversion or wish resulted, accompanied by suitable action, so upon revival of the emotion the impulse came back. Desire was the child of ideas, of remembrances of pleasurable sensations. Hence, to make a long story short, primary impressions received by the infant were transformed into habitual wishes directed either toward a possession of the original

stimulus, or toward such others as by association seemed equally worth while. Consciousness turned on the acquisition of pleasure-exciting things because these and the disagreeable experiences formed the great bulk of human experience.

For this reason Jevons could say that his economics was "entirely based on a calculation of pleasure and pain," that it was a "mechanics of utility and self-interest." [36] For this reason also his comparison of anticipation and realization was intelligible, for it was a special case of the general relation between sensations and centrally aroused emotions. Since ideas came from perceptions, and since association regulated most of our feelings and judgments, the expectation of a pleasure was a function, as Jevons remarked, of past pleasure and future actual pleasure. "The intensity of present anticipated feeling must . . . be some function of the future actual feeling and of the intervening time, and it must increase as we approach the moment of realization." [37] Upon this power of anticipation, we are reminded, "is based all accumulation of stocks of commodity to be consumed at a future time." [38] Curiously enough, Jevons did not use this concept for an agio-theory of interest. He was more interested in the balance between physical increments due to capital and the pain of abstinence than in time-preference by itself; but a suggestion certainly had been made that others could turn to good account.

Having then concluded by way of a quotation from Bain that "our *voluntary* activity [italics mine] is moved by only two great classes of stimulants, and that either pleasure or pain, present or remote, must lurk in every

[36] Ibidem.
[37] Ch. 3.
[38] Ch. 2.

situation that drives us into action," Jevons adopted in body the Benthamite doctrine of feelings as quantities, and nothing but quantities. The second chapter of the "Theory" was designed to prepare the reader for arguments grounded on this assumption. Bentham's "Introduction to the Principles of Morals and Legislation" served as a starting point for the exact measurement of feelings, and from Bain's "The Emotions and the Will," 1859, he quoted: "When pain is followed by pleasure there is a tendency in the one, more or less, to neutralize the other." [39] To be sure, Jevons doubted whether "men will ever have the means of measuring directly the feelings of the human heart. A unit of pleasure or of pain is difficult even to conceive," [40] and so on. But the way out manifestly was to predicate a constant quantitative relation between feelings and the actions resulting from them. "It is from the quantitative effects of the feelings that we must estimate their comparative amounts." [41] "The will is our pendulum, and its oscillations are minutely registered in the price lists of the markets." [42] "Pleasures, in short, are for the time being as the mind estimates them, so that we cannot make a choice or manifest the will in any way without indicating thereby an excess of pleasure in some direction." [43] Again: "Just as we measure gravity by its effects in the motion of a pendulum, so we may estimate the equality or inequality of feelings by the decisions of the mind." [44]

All of which meant that the proof of pleasure in an action was our willingness to act; or to put it differently, that the degree of intensity of wanting something was

[39] Ibidem.
[40] Introduction.
[41] Ibidem.
[42] Ibidem.
[43] Ibidem.
[44] Ibidem.

measurable by what we forewent in other pleasure, or suffered in physical or mental pain. Thus: "Anything which an individual is found to desire and to labor for must be assumed to possess for him utility." [45] It is "a convenient name for the aggregate of the favorable balance of feeling produced—the sum of the pleasure created and the pain prevented." [46] "The intensity of feeling," correspondingly, "must mean the instantaneous state produced by an elementary or infinitesimal quantity of a commodity consumed." [47] The *act itself* of purchase or of use testified to the reality of a new addition of pleasure, and a commodity, "if consumed by a perfectly wise being, must be consumed with a maximum production of utility." [48] In this spirit Jevons approached the task of equalizing feelings and appraisals of wealth. Feelings were to be gauged indirectly. Prices alone could inform us as to want intensities, but since these were bound to represent increments of pleasure and degrees of utility, utilities at the margin could be said to "*determine*" prices. The old utility notion of Senior and others which Jevons had particularly in mind, was thus made available for measurements that Utilitarianism had not dreamed of.

Other Marginists accepted the hedonistic postulate and until recent times did not question its worth. If Gossen had said, in the opening sentence of his book, that "man wants to enjoy life and makes it his chief aim to maximize happiness," [49] Wieser in his "On the Source and the Principal Laws of Economic Value," 1884, also asserted that "the wants of an artist differ only in *degree*

[45] Ch. 3.
[46] Ibidem.
[47] Ibidem.
[48] Ibidem.
[49] See Entwicklung der Gesetze des Menschlichen Verkehrs, pp. 4-5, 12, 23.

from those of a hungry beggar." [50] Marginism, he confessed, was an application of psychological tenets, though the precise nature of this application was dismissed with a bare mention of the Weber-Fechner experiments. Pareto, in his "Manual of Political Economy," 1879, expressly singled out exchange-valuations from the moral and theological [51] as being the only measurable ones—i. e., measurable in the sense Jevons had himself explained. A little later Pantaleoni declared: "Economic science consists of the laws of wealth systematically deduced from the hypothesis that men are actuated exclusively by the desire to realize the fullest possible satisfaction of their wants with the least possible individual sacrifice." [52] And perhaps it would not be out of the way to close with a passage from a noted critic of the static Marginal system who nonetheless believed that "a theory of prosperity assumes not only that pleasures and pains are commensurable, but also that a comparison can be made between the pleasures and pains of individuals living during different periods." [53] Thus had the Utilitarian psychology taken possession of Marginists of various shades who endeavored to preserve for economics its scientific character!

Wants, feelings, utilities, pleasures, happiness, and purchase were all one. An equation was invented for ideas and desires, for price and pleasure, for emotion and estimates, and in some quarters even for pleasures and virtue. Ideas through desires dominated preferences for goods. Rates of exchange furnished prima facie evidence of the relative intensities of wants. A rational egoistic "economic man" took precedence over all other

[50] Ursprung und Hauptgesetze des Wirtschaftlichen Werthes, p. 147.
[51] Manuel d'Economie Politique, 1909, p. 145; ch. 2, § 108.
[52] Pure Economics, transl. by Bruce, T. B., 1898, p. 7.
[53] Article on Cost and Utility by Patten, S. N., in Annals of American Academy of Political and Social Science, vol. III (1892-93), p. 410.

human factors in society. Because of certain laws of mind which escaped our control economics was in a position to formulate definite propositions regarding price, income, and productivity. Economists, in describing these laws, did their whole duty even though some of the most vital questions, from another standpoint, were not answered.

Marginism and Ethics. —For instance, the ethical aspect of social life or of individual conduct was not considered by the majority of Marginists a part of their science. The maxim of Bentham that pleasure and happiness are the same thing, and that virtue has no existence except in the attainment of happiness did not find many friends among the successors of Utilitarianism. The philosophy of Bentham and Mill was British, and not of the continent. In France, to be sure, it had gained some vogue and expressed itself rather effectively in Comte's Positivism. However, it should not be overlooked that even Comte's teachings terminated in mysticism. In Germanic lands it had never found much favor. Scientific socialism came nearest to it, but the idea of a cosmic law of changes, according to which economic stages determine non-economic life, deprived it of its original meaning; for the course of history was beyond human will; responsibility lay with the individual only in the sense that variations in thought and deed *seemed* to the individual self-regulated. In reality science taught differently.

Marginism thus grew up in an environment that took its morals from the transcendentalists and theologians. The universities at which the Austrians or Walras received their training were idealistically toned and under the sway of ideas alien to Benthamism. If even in England, as was shown earlier, many Utilitarian econo-

mists preached an ethical absolutism, this was still more the case among the Europeans and the Americans. Metaphysics, Puritanism, the Bible, Christian dogma, and the natural penchant of men for a lofty conception of right and wrong prevented a merging of ethics in economics, to the chagrin apparently of many writers.

But to begin with, the question arose: What is meant by economics when we explain its position relative to ethics? Do we refer to the science in the abstract, or to applications of an economic nature, or to special economic inquiries, or to a description of economic facts as such? Jevons had remarked that there were bound to be several economic disciplines, such as, e. g., "commercial statistics, mathematical theory of economics, systematic and descriptive economics, economic sociology, and fiscal science." [54] Keynes granted the possibility of an art of political economy, though certain that it would "be largely non-economic in character." [55] Menger, working along the lines marked out by German writers, from Kameralism upward to the encyclopedic compendia of his own day, recognized the four sciences of historic development and statistics, of morphology, theory of laws, and politics.[56] These four, he believed, made up the whole field of economics, adding that "the methods of theoretical political economy and of practical sciences of economics cannot be the same." [57] The bearing of this on ethics was obvious.

Philippovich in his "Outlines of Political Economy," 1887, one of the most readable and popular works of Marginal persuasion, held to traditions when he divided his science into four main parts, viz. description, His-

[54] Preface to second edition of his Theory of Political Economy.
[55] Scope and Method of Political Economy, p. 80.
[56] Conrad's Jahrbuecher, Neue Folge, 1889, vol. 19.
[57] Untersuchungen, 1883, p. vi.

tory, Theory, and Policy.[58] The Theory represented plain economics or National Economy; the Policy most of applied economics, while Public Finance was grouped separately. In this way, including possibly a World or Social Economics descriptive of universal principles, his classification was meant to do justice to all phases of the subject.

Now, dependent upon which of these divisions was kept in mind, ethics might be said to be part of economics, or not. Jevons, to be sure, was not bothered much by such niceties of distinction. He simply gave a variant on Bentham in suggesting that while economics cannot dictate moral norms to society, it could nevertheless recognize qualities of pleasures and judgments, confining itself to what perhaps should be called the lowest in rank. Paley could not be right in denying qualitative differences between feelings. "A single higher pleasure will sometimes neutralize a vast extent and continuance of lower pains."[59] But economics treats of "the lowest rank of feelings. . . ."[60] Each laborer, in the absence of other motives, is supposed to devote his energy to the accumulation of wealth. A higher calculus of moral right and wrong would be needed to show how he may best employ that wealth for the good of others as well as himself."[61]

Menger, in his illuminating though not very thorough treatment of the whole methodological question, shut out ethics from economics without hesitancy.[62] Moral facts, he admitted, are actually imprisoned in economic goods, but since they defy measurement they had best be ig-

[58] Grundriss der Politischen Ökonomie, 9. edit., vol. 1, p. 42. See also Sax, E. Wesen und Aufgaben der Nationalökonomik, ch. 6; and Wagner, A. Lehr- und Handbuch, 1. edit., vol. 1.
[59] Theory of Political Economy, Introduction.
[60] Ibidem.
[61] Ibidem; also p. 23.
[62] Untersuchungen, App. 9; and p. 69.

nored. Practical economics, furthermore, might very well make use of economic abstractions, but that had nothing to do with problems of good or evil.[63] He agreed in this respect with Walras who in his "Elements," edition of 1889, repeated an earlier view that science studies truth, art what is useful, and ethics what is equitable; and this being so, ethics was clearly eliminated from economic inquiries.[64] Similarly Gide, though of course not a Marginist, wrote in his "Political Economy": "To do one's duty, to exercise one's rights, to provide for one's wants, are three fairly distinct ends of human activity." [65] And again Cossa: "Ethics is absolutely foreign to pure economics," [66] though it might play a rôle in applications.

Sax, the author of "The Nature and Ends of National Economy," 1884, declared economics to be simply descriptive, while applied economics was necessarily normative,[67] a view voiced also by Schumpeter in his "Nature and Principles of Theoretical Economics," 1908.[68] Pierson, the Dutch Marginist, wrote in his "Principles of Economics": "Economics may be described as the science which teaches us what rules mankind should observe in order to advance in material prosperity." [69] The science was held to have a preceptorial value even though ethics might dissent from certain applications. Dietzel, whose position was that of an eclectic, though with a preference for "exact economics," separated ethics and economics, but granted that "economic policy must

[63] Page 58.
[64] Page 42.
[65] Edition of 1913 by D. C. Heath & Co., p. 2.
[66] Introduction to the Study of Political Economy, transl. by Dyer, L., 1893, p. 70.
[67] Wesen und Aufgaben der Nationalökonomik, p. 21; and pp. 93-4.
[68] Wesen und Hauptinhalt der Theoretischen Nationalökonomik, p. 94.
[69] Translation of Wotzel, A. A., 1913, vol. 1, p. 1.

be understood as applied ethics, and not as an instance of applying theory." [70]

Among English and American Marginists or Utilitarians making use of Marginal concepts the general attitude was hostile to moralism. It was insisted pretty generally that ethics and economics are two different things, not only as regards aims or premises, but fully as much as regards method. The prime consideration was the need of exactness in science, a corollary to which was the exclusion of ethics whose norms did not lend themselves to measurement in any way. As Marshall put it in his "Principles of Economics": "The greater part of those actions which are due to a feeling of duty and love of one's neighbor cannot be classed, tabulated, reduced to law and measured; and it is for this reason, and not because they are not based on self-interest, that the machinery of economics cannot be brought to bear on them." [71] Other social sciences, Marshall wrote, deal "almost exclusively with the quality of human motive," [72] but economics only with the quantity; for money measures "human motive on a large scale." [73]

Keynes a little later closed the question with the words: "The object of a positive science is the investigation of uniformities; of a normative science the determination of ideals; of an art the formulation of precepts." [74] Hence economics debarred ethics; or "if moral judgments are expressed they should be regarded as digressions." [75] So also, in America, Davenport in his "Economics of Enterprise," 1913: "The economist as such has no criteria by which to test the worth of what he finds. As

[70] Theoretische Sozialökonomik, 1895, pp. 29-40.
[71] Pages 78 and 83.
[72] Page 73.
[73] Page 76. See also p. x.
[74] Scope and Method of Political Economy, pp. 35-6.
[75] Page 53.

economist his business is solely with the facts," [76] though, on the other hand, "it is for some one to construct an economic science adapted not only to the requirements of the facts, but to the needs of their amelioration." [77] And to conclude with Ely and collaborators in "Outlines of Economics": Economics "considers ethical and political phenomena when these cannot be dissociated from economic phenomena, but insists, nevertheless, upon the separation of economics from ethics, politics, and sociology." [78]

The main point to be noticed, then, is the unwillingness of Marginists to identify social science with a theory of ethics, and this in spite of their sincere desire to make economics useful for the population at large where possible. The prevailing sentiment was not a contempt for high moral ideals, but the fear of breaking the chains of reasoning that made economics a science. It might be, as Fetter wrote, that "in the main economics must be understood as a social duty for social ends . . . ," [79] or that, in the words of Wicksteed, "the final goal of education and of legislation must be to thwart corrupt and degrading ends . . . to infect the mind with a wholesome scheme of values, and to direct means into channels where they are likeliest to conduce to worthy ends"; [80] but this was far different from assigning to economics a definite task *as* science.

Field of Marginal Economics.—Its field did not include all social phenomena as perhaps the sociologist might study them. Utilitarianism had as early as 1831,

[76] Page 30.
[77] Pages 528-29.
[78] Edit. of 1909, p. 675. See also Johnson, A. S. Introduction to Economics, p. 20.
[79] Principles of Economics, vol. 1, p. 9.
[80] Scope and Method of Political Economy in the Light of the Modern Theory of Value and Distribution, in *Economic Journal*, vol. 24, 1914, p. 11. See also Clay, H. Economics for the General Reader, edit. of 1916, p. 18.

in the person of Archbishop Whately, reduced economics to "Catallactics." Aristotle's term "Chrematistics" had also been revived; and "Plutology" was suggested as an improvement on both. All of these terms had circulated before Marginism came into its own. The competitive principle had long been heralded as the only one compatible with a program of precise monetary measurements. What went into the science of economics was an exchange-mechanism whose laws could be conveniently divorced from other regularities in the body politic. The whole problem, we have seen, had been succinctly stated and uncompromisingly settled. Yet Marginists were glad to bring new data to bear upon it, the upshot being a still more emphatic restriction of economics to value or wealth relations.

With this end in view Menger declared that things become "economic" when first wanted by man; second, capable of gratifying that want through ascertainable causal relations; third, capable of being understood to satisfy these wants; and fourth, legally acquirable for gratification of wants, directly or indirectly.[81] If admittedly this took care of only one phase of social life, Menger could point out that sciences inevitably deal with selected aspects.[82] And besides, the individual was the natural unit of society, whence one inferred the possibility of explaining fundamental social phenomena by individual traits.[83] The organic concept was not popular with most Marginists, nor for that matter was always understood. The Utilitarian legacy was an obstacle itself, since it consisted of an individualistic psychology whose lessons J. S. Mill had so superbly expounded in his

[81] Grundsätze der Volkswirtschaftslehre, p. 3.
[82] Book I, ch. 6.
[83] Page 182.

"Logic." It was still the eighteenth century that possessed men's minds and prevailed upon them to make the associational doctrine the hub of their thinking! Everything was based on a mechanistic interpretation of consciousness, at first by premeditation and in perfect good faith, afterwards not rarely in forgetfulness, or with some doubts as to the validity of the premise. Averages thus figured as methodological devices for "lumping" variables, for correlating things not strictly speaking comparable. Or long-time reckonings slipped in by way of elucidation, that is, "representative firms" and tendencies and aggregates of valuation such as Jevons spoke of.

Theory of Law in Economics.—Both the idea of finding price in averages, and the circumscription of economics as a science of exchange ratios, was a necessary result of an individualistic outlook. Given the "Analysis of the Phenomena of the Human Mind," as James Mill had perfected it, the feasibility of a "catallactics" was proven. It needed only certain legal rights to fulfill all requirements for an exact science of values. And this is what Marginism realized more clearly than any of the older systems. Physical facts, as Keynes pointed out, had then no part in the survey.[84] What counted was value, and value alone. If Philippovich, therefore, thought the task of economics was the study of "regular recurrences of economic facts, of their causes and effects not only in their mutual interaction, but in their bearing upon non-economic facts," [85] he was heterodox to that extent. For like Schumpeter [86] he was bound to agree that economics deals indeed only with price in one or more aspects. The problem was: Given individuals A, B, C; given their value functions I, II, etc., for n goods; given

[84] Scope and Method of Political Economy, pp. 82 and 96.
[85] Grundriss der Politischen ökonomie, 9. edit., vol. 1, p. 41.
[86] Wesen und Hauptinhalt, pp. 582-83.

their ownership of such goods qa1, qa2, etc.; find the exchange relations p1, p2, etc., at which exchange takes place; or find the positive or negative increments dqa1, dqa2, etc., dqb1, dqb2, etc., which would be added to the ownerships mentioned.[87] Put differently, "in its theoretical aspects the science of economics is indeed but little more than a study of price and of its causes and its corollaries. . . ." [88] It was as definite theoretically as sociology was at times supposed to be vague!

However, this abstraction of economic data from the general body of social phenomena brought with it a conception of law that might have seemed unsatisfactory even to J. S. Mill who fought so bravely to have morals put on a scientific basis. For unlike the Utilitarian notion the Marginal tended strongly toward independence from all environmental restraints. Mill derived social laws from the laws of consciousness and learning, which by all of his predecessors had been directly related to the outside world, and which to Mill himself were very real. The Utilitarian economics therefore had tried to keep in touch with actual facts and laws of price or distribution became objective in spite of philosophical phenomenalism.

Something like this view appears in the statement of Schönberg, in his "Manual," that "all laws of economics are grounded on the fact that what is external in its phenomena occurs according to natural laws, representing true operating forces, and that the personal psychic forces, in spite of variations, nonetheless reflect uniformities not only in essence but also in their effects." [89] As long as Mill's psychology was strictly adhered to this

[87] Pages 260-61; and pp. 129-33. Schumpeter takes a non-causal, *functional* view of pricing.

[88] Davenport, H. J. Economics of Enterprise, 1913, p. 26. See also Wicksteed, Ph. H., Common Sense of Political Economy, 1910, pp. 169-70, and the same writer's article in the *Economic Journal* for 1914, vol. 24, p. 2.

[89] Handbuch, edit. of 1890, vol. 1, p. 20.

interpretation might be put upon the classic analysis of exchange. The "economic man" was real; economic laws were real, even if subject to rectification in a particular case. There was nothing to controvert the old Sensationalistic argument in its psychological aspects, unless indeed one took the Kant-Hegelian view of dialectics which Pareto [90] for instance used in his "Manual of Political Economy," 1909, when delimiting statics as a working hypothesis for economics. But needless to say, the problem was not so treated by either Utilitarianism or Marginism.

Instead, Marginism carried the subjectivistic idea of knowledge over into the realm of price analysis—something that the Utilitarians had not quite dared. The tendency before long was very distinctly toward a conceptual dialectic. In fact as good a logician as W. Wundt, whose all-embracing studies entitle him to special consideration, declared in his "Logic," 1883, that the task of economics is not "the establishment of laws obtaining in a real economy outside, but rather the exact definition of economic concepts and of their reciprocal relations. . . ." [91] In other words, economic laws were of a somewhat mathematical nature, constructed upon idealities, and not directly verifiable by anything occurring in the phenomenal world.

Menger in his "Inquiry into the Method of Social Science" of the same year entertained similar notions, and for this reason no doubt opened his survey with a distinction between three kinds of studies, viz., the historic-statistical, the theoretical, and the practical. The immediate occasion for this assertion was of course his desire to expose the weaknesses of the Historical position. He felt that Historism struck at the root of social science

[90] Pages 45 and 107.
[91] Logik, 2. edit., vol. 2, Part II, p. 518.

as exact science, and had to be proven wrong and vicious. Thus his "Inquiry" came to have a very definite influence not only upon economists, but especially also upon German methodologists.

In general, what gains were made consisted chiefly of a better understanding of the difference between static and historical viewpoints, of neatness in mathematical presentation, and of tolerance for induction as an auxiliary. Jevons in his "Principles of Science," 1874, said nothing of economic methods. Menger shows the influence of Ruemelin [92] and of current German logic,[93] though partly by way of opposition. Sax and Philippovich did not at any time go beyond generalities. In England Marshall and Keynes were conscious of a serious methodological problem, but did not step out of the path made by Mill. All in all, the economic literature exhibits few signs of acquaintance with the leading logical works of the day. It was held, probably, that the fundamentals were sufficiently known, or that only such phases required special consideration as aided in the delimitation of economic research. Psychology for this reason was drawn upon more heavily than logic, and the familiar dispute about in- versus de-duction took second rank to the case of statistics or history versus statistic deduction.

Thus Menger, in beginning with his threefold classification, prepared readers for his distinction between individual and recurrent events. Economics, he showed, dealt with the latter class; history with the former. Science could not *be* without regularities of sequence or of coexistence.[94] Laws referred to *types* of things and

[92] Ruemelin, G. von (Chancellor of Univ. of Tuebingen), Reden und Aufsaetze covering the period of 1875-94, in three volumes. Difference between deductive and statistical method is specifically brought out.

[93] Wundt's Logik appeared 1880-83.

[94] Untersuchungen, ch. 2. Compare this with Paul, H. Prinzipien der Sprachgeschichte, 1880, ch. 1.

relations, and these certainly contrasted with things themselves, or with the kind of reality that historians investigated. For the past could, as such, give nothing but actual occurrences, each of which differed in some point from any other. Historians wanted nothing else. How could they hope to do more than tell how things actually happened, as Ranke had maintained? To philosophize on chains of incomparable events was a service useful to none. On the other hand, to pretend erecting a structure of laws (say of progress or of exchange and distribution) upon historical data, each group qualitatively distinct from the other, was to misunderstand entirely the essence of law natural or law social.

Menger, setting a precedent for later writers, therefore passed over to a statement on the nature of economic inquiry, and in doing so contrasted not merely relations of things with the latter themselves, but also the two with our *concept* of them. What Wundt [95] said proved to be nearly correct: Economics was, in a sense, a conceptual science on the order of mathematics. No one had seen the magnitudes or relations discussed, measured, and interlaced in man's mind, but that did not prevent us from obtaining inner consistency in our system, or from testing it out under forfeiture of the abstractions themselves. As Menger acknowledged: "The essence of exact science in the field of ethical [i. e. social] phenomena consists in that we reduce social phenomena to their simplest elements, measure them by a standard suitable to their nature, and try to find the laws according to which these elements, pictured as in isolation, give rise to more complex social events." [96] The constituents were to be determined beforehand partly as gen-

[95] Logik, 2. edit., vol. 2, Part II, p. 500.
[96] Untersuchungen, p. 43. See also pp. 77-8, and Book I, chs. 5 and 7, passim.

eral premises, partly as definitions resting on them. What did not occur in isolation was to be imagined to occur so that, by means of this artifice, certain calculations might be attempted. Allowances could then be made afterwards, the supposition being that all interference was exceptional or, if regular, of minor effect upon the general course of things. Wundt said that economics comprised a system of relations lifted out of a larger actual whole, i. e. happenings in the outside world, arranged conceptually "in progressive logical dependence from the least to the most special."[97] That is what Marginism accomplished in detaching "exact law" from the unstable correlations before our eyes. That was the reason for Menger's remark: Whether the individual factors actually exist in isolation or are really measurable exactly is of no importance in social science any more than it would be for natural science.[98] In other words, though natural science could measure particulars actually occurring and social science could not, this difference had no bearing on the main argument. It still remained for the economist to abstract as he listed, so as to be able to develop a self-consistent system of thought. Even deductions from premises *known* to disagree with particulars had their value from this standpoint. The empiric laws of Utilitarianism which roughly marked tendencies measurable and true to human nature or history were less consequential than a precise formulation of theorems not concretely verifiable.

For the rest, laws were approximations only. The results of social science differed from those of natural science only in degree. A tendency was all anybody could

[97] Logik, 2. edit., vol. 2, Part II, p. 500.
[98] Untersuchungen, pp. 45-6.

discover, the real causal relation being too complex for our means of analysis.[99]

Statics of Marginism.—It followed from this guiding principle that economics took a static view of the world. There was no possibility of reckoning with all the interactions as they took place in history, since that would involve change everlasting and a loss of the very regularities science sought to discover. Processes should be conceived as an interplay of forces at rest. If the equilibrium was disturbed it was not for long, or else the process ceased to be a subject for economists. What counted was an average of the arithmetical sort, the number of items being known by assumption, and the lesser magnitudes being purposely left out of the computation. This was the idea taken over from physics during the eighteenth century—a reasoning from analogy apparently justified by the facts. For that human nature was one with the physical environment and that the laws governing the latter also applied to the former seemed self-evident ever since the Stoics had philosophized and the Cartesians, of several varieties, had given British empiricism its impetus. The mind was pictured as a sort of parallelogram of forces. Matter and motion were facts attributed to consciousness no less than to substance. The whole theory of the passions gained plausibility from this postulate which could be used to satisfy the idealist no less than the materialist (in the metaphysical sense).

Bentham had called his table of the springs of human action a "psychological dynamics." Comte had popularized the Newtonian description of the world in his "Positive Philosophy" where "social physics" was the

[99] Ibidem, pp. 36-7. See also Schumpeter, J. Wesen und Hauptinhalt, pp. 191-92, and Keynes, J. Scope and Method, p. 213.

subject-matter for discussion. True, unlike the Utilitarians and especially J. S. Mill, Comte saw no way of separating economics from the larger whole; nor was he, as it happened, a believer in a science of psychology. To him physiology was real, but consciousness only a convenient term for individualizing social facts. Yet it was he above all who encouraged economists to abstract statics from dynamics, i.e., from actualities, so that long-run tendencies might be isolated. According to our French philosopher "social dynamics studies the laws of succession, while social statics inquires into those of coexistence; so that the use of the first is to furnish the true theory of progress to political practice, while the second performs the same service in regard to order." [100] His well-known differentiation between order and progress was grounded in a recognition of the law of change.

History had been studied too often by men of great speculative power not to be included in an estimate of human values. The physical or mathematical concept of equilibrium proved extremely useful in a contrasting of past and present, of things as they are with things as they had been at successive historical epochs. It was clear to Comte that human nature must be viewed in both lights if the whole truth should become known, and on this account he suggested a method of investigation auxiliary to the accepted induction of Francis Bacon and his successors. Events were not absolutely alike for any length of time, but they could be considered so for an instant of time. Social laws were observable as truly in the facts before us, as in the stages through which they passed weaving the cloth of history.

Jennings in his "Natural Elements of Political Econ-

[100] Positive Philosophy, abridgment and translation of Miss Martineau, 1855, p. 464. Compare this with Spencer, H., Discussions in Science, Philosophy, and Morals, edit. of 1890, p. 133.

omy"[101] had adopted Comte's notion. J. S. Mill even earlier had contrasted a "theory of motion" [dynamics] with a "theory of equilibrium" [statics], this latter being a "collective view of the economical phenomena of society considered as existing simultaneously."[102] Somehow the thought of succession was coupled with dynamics, and that of coexistence with statics. Pareto in his "Manual" wrote: The economic equilibrium is that "state which would be prolonged indefinitely in the absence of changes for conditions surrounding it."[103] The habit, for instance, of consuming a half pound of bread daily would persist if no forces were brought to bear upon the consumer from outside. The average event should engage the economist, not the tracing of all possible incursions as a long-time view might reveal them. Thus Keynes judged that dynamics deals with the "manner in which conditions vary over long periods of time, together with the economic changes that ensue thereupon."[104] More, "the dynamics of political economy is exceptional in its almost entire dependence upon an historical method of treatment,"[105] while in general the economist followed the deductive principle in his inquiries. His laws would be the same since interferences with the assumed forces amounted to little in the aggregate; only the viewpoint was different. In the words of a later writer: "There is nothing new but the situation";[106] the principle was the same whether exceptions were taken historically or not.

This, to be sure, was not the opinion of every student of Marginism. Increasingly during the twentieth cen-

[101] Preface, p. 30.
[102] Logic, Book IV, ch. 1.
[103] Ch. 3, § 22.
[104] Scope and Method, p. 141.
[105] Ibidem.
[106] Davenport, H. J. Economics of Enterprise, p. 425. See also Clark, J. B., Distribution of Wealth, 1899, chs. 15 and 16.

tury critics made bold to challenge the important contention that dynamics was to statics what the exception was to the rule, as if the first might be with justice neglected in the study of economic processes.[107] Schumpeter, e. g., declared: "The dynamics of economics is in every respect something radically different from its statics, both as to method and as to contents." [108] The two should be complements, but they could not be rent asunder as if one could do the work of both. Even though equilibrium were that "state in which, as long as no disturbing factor from outside appears, no leaning toward change exists," [109] yet, since the interferences were continuous, a complete analysis of events involved disequilibrium as well. Hence, "in so far as statics is merely a logic of economy, it has universal validity, but when it professes to give a psychology of the process it must prove sadly remiss." [110]

Up to the turn of the century, however, Marginism was regularly committed to static interpretations. The only concession made was the enumeration of certain factors back of dynamics, these factors to receive attention *after* the system had been completed, but not before. J. S. Mill himself had, as master of logic, pleaded for this rule, and relegated his "Influence of the Progress of Society on Production and Distribution" to the end of his "Principles." J. B. Clark in his "Distribution of Wealth," 1899, cited among the dynamic facts: Population, methods of production, organization, capital and wants; [111] Davenport, in his "Economics of Enterprise":

[107] See, e. g., Patten's comment on Pantaleoni's dynamic view in Papers and Proceedings of the American Economic Association, Series 3, 1910, vol. 11, pp. 128-29.

[108] Wesen und Hauptinhalt, p. xix.

[109] Pages 36 and 199.

[110] Theorie der Wirtschaftlichen Entwicklung, p. 512, note, and pp. 473-88. See also Anderson, B. M. Value of Money, p. 559.

[111] Ch. 25.

Changes in humanity such as of numbers, wants, and capacities, and changes in environment such as in land, capital goods, and in loan fund;[112] and Fetter in his "Economic Principles," 1915: Population, culture, natural resources, and technique of production in the widest sense.[113] To this extent then Historism had made its point in demanding a broader, less arbitrary, less cocksure treatment of social facts than Utilitarianism had granted. A common sense view was allowed after science had done with its self-imposed task. Statics condescended to recognize Dynamics, just as Competition treated Monopoly leniently, not to abdicate superior rights but to prove its own merits.

The Method of Marginism.—The question of method in the stricter sense was answered in harmony with the above views. It was agreed for the most part that history and statistics could play only a secondary rôle in the establishment of laws. The principal means was deduction from premises laid down, the premises resulting from induction of the sort British empiricists had first called "experimental." All the Utilitarians had insisted that their postulates were the conclusions, inductively arrived at, of a science basic to economics, psychology being that science. Mill in his "Logic" had called attention to this fact and in addition urged the possibility as well as the advisability of checking up economic deductions by the actual facts of a special case.

The Marginists agreed to these views, but when challenged by critics like Ruemelin for excessive abstraction added that reasoning from chosen premises did yield "constant elements [Grundformen] indicative of mass ef-

[112] Pages 453-54.
[113] Vol. 1, pp. 400-01. See also Pantaleoni, M., article in American Economic Association publications, Series 3, vol. 11, 1910, pp. 113-16.

fects in the interaction of psychic forces." [114] Jevons made of economics a "mechanics of utility and self-interest" in the belief that "the first principles of political economy are so widely true and applicable that they may be considered universally true as regards human nature." [115] Or to quote from another page: "That every person will choose the greater apparent good; that human wants are more or less quickly satiated; that prolonged labor becomes more and more painful, are a few of the simple inductions on which we can ground . . . a complete mathematical theory." [116] To be sure, "the deductive science of economics must be verified and rendered useful by the purely empirical science of statistics." [117] Induction was an essential in spite of its derivation from deduction. However, in the first place, "induction . . . can only be performed by the use of deduction," [118] and in the second place "induction is simply an inverse employment of deduction." Jevons had been greatly stimulated by the logic of G. Boole, and developed further the idea of substitution and quantification by which many logicians have hoped to free their work from medieval fetters. But so far as economics was concerned this treatment of the syllogism as the key to all reasoning gave additional prestige to the abstract deductive method. Economics on this plan was almost certain to become a conceptual science, however strong Jevons' conviction that all scientific conclusions are but probabilities resting ultimately on the use of calculus, and therefore truths whose verification is either empirical in the ordinary sense, or else irrelevant. What Jevons expected from an averaging of valuations in the

[114] Ruemelin, G. von, Reden und Aufsätze, vol. 1, 1875.
[115] The Future of Political Economy, 1876.
[116] Theory of Political Economy, first edition, p. 24.
[117] Ibidem, Introduction.
[118] Ibidem.

marginal analysis of price is to be understood precisely in the light of his earlier work on logic.[119]

Menger's study of method agrees fairly well with that of the English writer, though aiming partly at different things. In both cases we meet with appreciative references to the psychological aspects of the question, but Menger, mastering a much smaller range of facts, dwells especially on the impracticability of Historical ideals which resorted so frankly to the principle of enumeration. Menger at once asks us: Would it be possible to prove a single theorem of Euclid by referring to experiential lines and planes? And the reply of course is: No! Neither then could Historism obtain exact knowledge by delving into the distant past.[120] There was no such thing as precise measurement; for any correlation of economic events, no matter how simple, comprised far more elements than man could either detect or appraise for his purposes. The empirical method, therefore, deserved no serious consideration. As Wieser later remarked in his "Natural Value": The laws of value "are to economics what the law of gravity is to Mechanics"; [121] both springing from hypotheses which were beyond explanation. We deduce, but only here and there have material for substantiation of claims.

That is, observation and experimentation had no place in economics, first because the subject-matter was unsuitable, and secondly because psychology had already furnished the data to build with. Pricing could proceed on deduction, since feelings or anticipations of pleasure *and pain engendered the same reactions in all men for all times*. Regular recurrences expressed in pecuniary ratios thus were certain; one could proceed from general

[119] See Jevons' Principles of Science, notably chs. 4, 6, 7, 11, 23 and 31.
[120] See for instance Menger's Untersuchungen, Book I, ch. 4.
[121] Preface.

to particular, and the monetary standard would measure exactly the preferences exchanged. This was the attitude of Marshall [122] and of Keynes,[123] of Pierson [124] and Philippovich [125] and other exponents of Marginism.

Keynes, of course, saw the value of variety in research. He thought: "According to the special department or aspect of the science under investigation the appropriate method may be either abstract or realistic, deductive or inductive, mathematical or statistical, hypothetical or historical." [126] But this was merely a defence for combining methods that differed in their appraisal of facts more than in principles of reasoning. These latter were not seriously examined by any of the Marginists or by men dealing with Marginism. It was natural for Keynes to mention four fundamentals in economics, and then to defend deduction as *the* method. Thus he writes: Maximum satisfaction "with the smallest possible sacrifice, the law of decreasing final utility as the amount of commodity increases, the law of diminishing return from land, and the like, are premises which possess the requisite degree of universality" for deductive reasoning.[127] Bagehot's essay on postulates in economics was agreeable to Keynes, though he confessed, by way of qualification, that "the validity of economic postulates varies not only from time to time, and place to place, but also in different connections at the same time and place." [128] Any Marginist, however, might have granted this without abandoning the deductive method, for his system was

[122] Principles of Economics, pp. 74-77.
[123] Scope and Method of Political Economy, ch. 6.
[124] Pierson, N. G. Principles of Economics, transl. by Wotzel, A. A., vol. 1, Introduction.
[125] Grundriss der Politischen Ökonomie, 9. edit., vol. 1, pp. 46-49. See also Dietzel, H. Theoretische Sozialökonomik, pp. 94-96.
[126] Scope and Method of Political Economy, p. 30.
[127] Page 227.
[128] Page 228.

avowedly built, not on conditions for all times, but on such as prevailed for the moment.

The methodological question was not whether certain assumptions were perennially valid, but whether per time and place they answered a need, being sufficiently true to facts under investigation to warrant our using them, so that the conclusions could be proclaimed as laws regardless of minor fluctuations. And this Marginism desired to demonstrate. Deduction became both worth while and necessary because of the laws of valuation. No other approach compared favorably with this one, not even the statistical, and that chiefly "because of the plurality of causes and the intermixture of effects" [129] whose significance J. S. Mill had been the first to stress. Pierson agreed with Keynes, since "reasoning or—to use a technical expression—deduction is the only method by which successful results can be obtained in the tracing of economic laws." [130] Philippovich, like the rest, separated in- and de-duction mainly in order to advocate the latter, and American Marginists usually followed in practice, if not in theory.

Note on Mathematical Economics

It was natural enough that mathematics should play a part in economics as soon as it was realized that quantities of an economic sort existed and were functionally related. The change from Physiocratism to Smith's emphasis on price and income was itself a bid for exact measurements and their graphic presentation, and when under Utilitarianism and Marginism this distributive feature became the central topic, the mathematical princi-

[129] Page 198.
[130] Grundriss, 9th edit., vol. 1, p. 33.

ple of coördination could scarcely have been long overlooked. However, it was not Marginism that introduced this thought, nor was there anything in the mathematical method to require a theory of margins. The first requisite rather was a suitable set of symbols, an annotation capable of expressing precise relations of magnitude, and in the second place perhaps some such visualization as Descartes made possible by his invention of analytic geometry (1637). To use lines and figures instead of letters in an equation might prove advantageous, once the concept of variables in correlation was understood. The calculus of variation has been defined as "a method of finding curves having a particular property in the highest or lowest degree." It needed no long argument to show the applicability of such measurements to monetary values.

Cournot in his "Researches into the Mathematical Principles of the Theory of Wealth," 1838, did not try to defend his innovation, but simply pointed to the fact of value as a ratio, to equations of exchange, and to sympathetic movements of price as the best possible material for a mathematical method. Annual demand, he said, is "for each article a particular *function* of the price of such article." [1] And "just as it is possible to make an indefinite number of hypotheses as to the absolute motion which causes the observed relative motion in a system of points, so it is also possible to multiply indefinitely hypotheses as to the absolute variations which cause the relative variations observed in the values of a system of commodities." [2] Whewell treated some of Ricardo's theorems mathematically in 1829. Carey on different occasions approved of the idea, and in his "Unity of Law,"

[1] Translation of Bacon, N. T., 1897, ch. 5, § 21.
[2] Ch. 2.

1872, wrote: "Mathematics must there [in social science] be used, and the more it is used the more must sociology take the form of a real science. . . ." [3] MacLeod in his "Principles of Economic Philosophy" had said: "The pure science of economics is capable of rigorous mathematical demonstration." [4]

On the one hand, then, the use of mathematics antedates Marginism, while on the other it was by no means common among the Marginists. The bulk of treatises and periodic literature either waived the question, or employed annotation and graphics sparingly. If Jevons and Gossen and Walras set a precedent for their own school, so did Cournot, Colson, Pareto, and Pantaleoni for economists of a different persuasion. The real question was not whether economic magnitudes, correlations, and other principles might not be adapted to such treatments as mathematics stood for preëminently, but what precisely was the nature of a mathematical method, what its bearing upon the methodology of social science. And on this important matter opinions were divided. *At different times economists meant by the mathematical method either dēduction as such, or any use of algebraic symbols or of graphs, or coördinations of two or more variables of a simple kind, or merely an exact measurement of magnitudes.*

Men like Bernouilli and Hume, for instance, called social science mathematical because it proceeded deductively, while natural science according to Bacon rested on induction. Even J. S. Mill used the word mathematical occasionally in this sense. Jevons took more nearly the last interpretation given, in that he divided

[3] Page 65. See also Manual of Social Science, a condensation of same writer's philosophy by Kate McKean, 1866, p. 31.
[4] Second edit., vol. 1, p. 124. For view of Walras (L.) see his Elements d'Economie Politique Pure, edit. of 1889, p. vii.

all sciences into the logical and mathematical. He wrote in his "Theory of Political Economy": "There can be but two classes of sciences—those which are simply logical and those which, besides being logical, are also mathematical." [5] Economics, it need hardly be mentioned, was of the latter variety, but it was at the same time admitted that "equations expressing the laws of supply and demand . . . have a complexity entirely surpassing our powers of mathematical treatment." [6] His "Principles of Science," brings out very clearly the limits of the mathematical method in economics; certainly much more so than his "Theory." In fact, we are reminded of our ability to reason mathematically without taking recourse in symbols,[7] even without believing in a precise correlation of an indeterminate number of variables. Jevons thus distinguished between inference and measurement, but was misled by a faulty psychology.

The majority of Marginists defended mathematics from either the logical or the practical standpoint. That is, they recommended the use of algebraic symbols and graphs when not sure of the possibility of exact measurements, nor perhaps of the adequacy of coördination for economic ends. In both cases the mathematical method was said to be used, the term thus having a vague meaning that only served to render more difficult a final decision on the subject. Yet it had been the belief of many Utilitarians that mathematics was ill-adapted to economic purposes. Rau and Thuenen for instance granted the convenience of mathematical abbreviations, but no more. Roscher thought human interrelations too complex to be treated by Descartes' geometry.[8] Comte,

[5] Ch. 1.
[6] Principles of Science, 3. edit., p. 759.
[7] Theory of Political Economy, Introduction.
[8] Principles of Political Economy, transl. by Lalor, J. J., 1878, Introduction, ch. 3, § 22.

J. S. Mill, and Leslie sided with this view. Ingram wrote: "Mathematics can indeed formulate ratios of exchange when they have once been observed; but it cannot by any process of its own determine those ratios; for quantitative conclusions imply quantitative premises, and these are wanting." [9] Cossa declared the mathematical method to be a mere "convenience of applying to our science the figures and symbolic forms which are frequently found useful in purely deductive sciences. . . ." [10] Keynes thought that "the mathematical methods in economics fall into two subdivisions, the algebraic and the diagrammatic," [11] but shows his essentially anti-mathematical leaning by the very statement made.

So far, of course, the instances have been taken mainly from Historism or Utilitarianism and it might hence appear as if Marginism stood solid in its defense of mathematics. Yet that is not so. Marshall, for instance, appreciated the value of margins, but said also: "The chief use of pure mathematics in economic questions seems to be in helping a person to write down quickly, shortly and exactly some of his thoughts for his own use. . . ." [12] The French Marginist Aupetite confessed that mathematical economists "do not know exactly what it is that binds the function and the variable together, or the intensity of the satisfied need to the quantity already consumed" thus disavowing causality.[13] And Pierson deemed mathematics of no greater value than lay in its affording us "an excellent means of testing our conclusions,

[9] History of Political Economy, edit. of 1888, p. 182.
[10] Introduction to the Study of Political Economy, transl. by Dyer, L., p. 44.
[11] Scope and Method of Political Economy, p. 238, note.
[12] Principles of Economics, Preface to first edition.
[13] Théorie de la Monnaie, p. 42. See also opposing view of Leroy Beaulieu, P., in his Traité, 4. edit., vol. 1, pp. 88-92.

by seeing whether they can be set forth in a diagrammatic form." [14]

Without going further into the subject, one can gather sufficiently from the above quotations what economists meant by a mathematical method, and to what extent they understood the issue ultimately involved. Evidently no keen desire was expressed to differentiate between correlation and causation, averages and individuals, conceptual or empirical laws, questions of verification versus proof in the abstract, and so on. The general feeling was one of kindliness toward the science which had more than any other set up syllogisms and systems. Marginism was akin to mathematics in this respect. The *expression* of a coördination was put in lieu of its *explanation.* Exchange ratios being given, a means was desired for tracing their changes graphically on paper, and this led to the use of analytics. A clear-cut objection like Ingram's was exceptional, and besides directly antagonistic to the whole view of society and of economic processes that Marginism had espoused as the alone scientific. Marginists consequently found much that was worth while both in the form and in the substance of mathematical inquiry.

[14] Principles of Economics, transl. by Wotzel, A. A., vol. 1, pp. 21-22.

CHAPTER EIGHT

MARGINISM (Continued)

II. Principles

Preliminary Observation.—The definitions and laws of Marginism, which together may be said to constitute its principles, were of course based on its premises. The same circumstances that gave Marginism and Utilitarianism premises in common also gave them a similar superstructure; for Marginism was a reaction against Historism primarily, not against what was fundamental in the classics. It was clear from the start that the Marginists would take over the bulk of English doctrines, including certain premises and definitions, and not excluding altogether even the objective norm of measurement which had its inception in seventeenth century studies of price.

But what especially enables us to trace a clear line of descent is the entrepreneur view of economic organization, which Adam Smith had qualified somewhat by his half theological, half ethical background, and which Marginism took over unreservedly from Utilitarianism in the form it there first assumed. The captain of industry was plainly at the center of affairs. The appraisal made by the employer figured prominently in the analysis of price and income as offered by both Utilitarian and Marginal economists. The competitive scheme which rested on legal axioms relative to property, contract, and vocation

was taken for granted as not only *the* type of existing social order, but as something perennial and universal. Marginism consequently had no quarrel with the general drift of Utilitarianism. What it proposed to change, and did change, was the standard of measurement for exchange ratios, and the explanations given for the *naturalness* of the pricing and distributing process under investigation. On this account mainly Marginism formulated tenets and definitions underlying them which at first sight might appear a radical innovation for all their kinship with older beliefs.

Definitions.—Value was given two different meanings, namely, first a purely psychological, and secondly a commercial. From the former standpoint the cardinal fact was man's ability to feel and judge and express his ideas in outward acts. Value was an act or a state of consciousness, an imputation of qualities to things or deeds, a manifestation of history that changed environment and endeavor. The eighteenth century thinkers had talked as if utility were something inherent in things. Not that the foremost philosophers, either empirical or transcendental, had given one that impression. Hardly! But among economists the stress upon things was so common as to permit the charge later made. Hence toward the beginning of the next century critics went out of their way to denounce the claim of "absolute" value, meaning that utility is not an inseparable part of goods in the market. During the last generation, however, the word "absolute value" has come into use again, and now we contrast it with exchange-ratios which to orthodox Marginism were the only values of economics. The act of imputation was studied. The subjective nature of value seemed obvious, even if much was said about it. But it was in most cases added that while valuation

formed a notable part of psychological analysis, the immediate concern of economists was value as exhibited in exchange. Jevons was not without reason persistent in his reiteration of this familiar fact, for according to Marginism everything depended on our having an index of those psychological forces that Hume and Mill had tried in vain to subject to experimental methods. Ratios, not absolutes! Fractions, not entities! Differentials, not totals! Margins, not initial response or satisfaction! Here were contrasts to conjure with and to exploit in a scheme of pecuniary comparisons.

What measured utility was want, and want itself served as a key to pleasure and price. Utility was anything capable of gratifying any want whatsoever—a notion warmly welcomed by the Utilitarians in their own inquiries. Scarcity was insufficiency of supply relative to demand under given circumstances at a fixed time and place. If things tangible or intangible were useful and scarce, and transferable by enactment of law, they became valuable by that fact. Moral questions, as we have seen, had no part in this diagnosis. The existence of a monetary standard was reckoned with, but not logically necessary, for in exchanging one unit of a good for units of another a price at once emerged, the ratio being just as real that way as when money intervened because of the economy attained in introducing a general denominator.

The force of the new concept lay in its independence of old-time costs. Cost now was no original element in value. Cost had to be explained through supply, if a relationship was desired. Concrete objects ceased to be the sole subject for measurement. Stuff was in no wise involved, except incidentally. The logician could argue so, even if governments and sociologists wondered at the re-

sults. Goods, however, were known to be ephemeral or durable. Some could be used only once; others many times. Some deteriorated physically while, or without, being used; others might remain intact in any but the economic sense. Furthermore, some values depended on the existence of a single article or service, while many were "complementary," as for instance the parts of an automobile or of any combination of things in production and consumption.

Wealth was a fund of values rather than a conglomeration of things physical. Nothing mattered from the individual viewpoint except a possession of values, now simply rights to things, now imbedded in tangible assets. A difference between private and social norms of appraisal was admitted as frankly by the Marginists as by Utilitarians from Say and Lauderdale up, but their choice lay, nevertheless, with the former. Non-pecuniary values, i.e., utilities or wealth not marketable or not at a given moment part of open market operations, were shut out of the system. They could be considered as extraneous matter or data furnishing sidelights on economic problems proper, yet the line between the two was hard and fast. The definition of production proved this convincingly.

Production consisted of a creation of *values*. The Utilitarians popularized this idea, and many half-hearted critics of both Mill and Marginism assented to it. Thus Gide, in commenting on the errors of Physiocratism, writes: "The essence of production is not the creation of matter, but simply the accretion of value." [1] Precisely so. Any addition to values individually owned formed for that owner a proof of production. The act

[1] Gide, Ch., and Rist, Ch., History of Economic Doctrines, transl. by Richards, R., from French edition of 1913; p. 16.

of production was the act of acquisition itself so long as legal limits were observed. Stuff might be a *conditio sine qua non* for collectivists; Marginism was not blind to this fact. But what counted in its analysis was creation of values, value being previously defined. Production consequently need involve only a sale of rights, as in the lending out of wealth. No manual or mental labor was necessarily implied. An individualistic standard could dispense with such presuppositions. And similarly productivity was a rate of production per one or more of several standards; perhaps per population, or per time unit, or per monetary values spent. It mattered not, though ordinarily, and again in conformity to premises, productivity could mean no more than rate of production (income) per unit of expense (outgo). The rest encroached upon the exchange mechanism.

Capital had long been defined in either a stuff or value sense. Boehm-Bawerk astonished his readers by the long list of interpretations collected and collated with much assiduity. As he showed, though not without having others to guide him, rights could not be included among the wealth of a nation under any but the competitive standpoint. The Historical group and the Katheder-Socialists had devoted considerable time to this question. As part of their regular work men like Wagner, Schmoller, and Ely [2] went into the history of property and contract, making clear their relation to any one system such as Utilitarianism, and honoring thereby some of the thoughts so predominant in Marx. Capital, Boehm-Bawerk said, "we shall call a group of products which serve as means to the acquisition of goods." [3] Capital,

[2] Property and Contract in Their Relation to the Distribution of Wealth; two volumes, 1914. See also Boehm-Bawerk, E. von. Rechte und Verhältnisse vom Standpunkte der Volkswirtschaftlichen Güterlehre, 1881.

[3] Positive Theory of Capital, transl. by Smart, W., 1893, pp. 38 and 59.

said Philippovich, is "a power to earn expressed in terms of money." [4] Capital, conceded Davenport, is "wealth held for increment; . . . wealth in time," [5] etc.

Capital, in other words, originated independent of labor or savings, or at any rate could so originate. It was a fund of values due perhaps to appreciation or to acquisition of privilege unexpected by the benefitee. Capital was a fund of values like wealth, but with this difference that it must be employed productively, production having been defined before. Since production involved creation of values, and since values were subjective, imputed by man in time and space, it followed that productive use also was an instance of imputation, something external to the thing itself, even if perchance it did take tangible form. Items of wealth were capital according to whether a profit would ensue in the course of the employment of such wealth, or not. Publicly owned wealth was not, under this caption, "capital," nor goods used within the privacy of a home. But transferred to a business unit, or temporarily utilized in activities making matter for exchange the same wealth was capital. Successive incomes or rights to income could be added to constitute capital. Capitalization was an act of computing such rights according to certain principles. What had no substance might yet be all important. What *was* not yet, could nonetheless create capital, as when rights to goods not yet available provided a basis for capitalization. And withal, from the personal standpoint, the value of rights or things varied inevitably with the value of their products in concrete or inconcrete shape, so that not only the cause, but also the measure

[4] Grundriss der Politischen Ökonomie, 9. edit., vol. 1, p. 37.
[5] Value and Distribution, pp. 146-47.

of capital was a pending income, a hypothetical or actual right (in the future) to goods.

The notion of cost—ignoring for the nonce the interesting fact that the word and idea lingered in the Marginist's mind—accorded well with the definitions just given. Costs were under ideal circumstances outlays of value, estimated now as of the present or near future, now as of the time they occurred. Money would measure the costs, though not necessarily. Loss of opportunity also figured as cost, that is if a larger potential gain was forfeited for a smaller actual one. Labor-pain was cost, and lastly, too, the pain of abstinence or of anticipation which was somehow, implicitly, contrasted with the joy of realization. Impatience was a cost, it was argued. It had to figure in price, business accounting leaving no option in this matter. It was granted, however, that, as to labor-pain, consumption utilities should offset it, this being an object of solicitude for both Gossen and Jevons, and indeed for others more recently.

When it came next to defining the terms relating to the marketing process a market was regularly defined as something like a meeting-place of buyers and sellers. On the question of demand a split occurred because some held it to be simply want accompanied by purchasing-power, while others thought of it as an offer of a definite sum of values for the things to be bought, and others still as the purchase itself. It was asked: Was there any "demand" if nothing was really bought? The replies varied.[6]

Supply, however, seemed less elusive a term. It figured as offer of values for sale at certain prices, not necessarily at only one price. Consumption was the destruc-

[6] For double meaning of the term see, e. g., Fetter, F. A. Economic Principles, 1915, vol. 1, p. 46.

tion of values either with or without use, agreement on this point never having been reached. That depreciation alone counted, and not deterioration, was self-evident.

However, what of the place of consumption in the Marginal scheme? In the opinion of some its definition was the hardest part because of uncertainty as to its rôle in economics. Sax for instance wrote: "Consumption as such isn't part of economics, though the economic process involved must be." [7] Pierson believed: "There is no such thing as a theory of consumption in the sense of a branch of the science of economics." [8] Schumpeter shared this view which had long been advanced by prominent Utilitarians.[9] On the other hand, Jevons was anxious to show that "the whole theory of Economy depends upon a correct theory of consumption," [10] while Keynes declared: "A true theory of consumption is the keystone of political economy," not denying that it would be a premise rather "than constituting in itself an economic law or laws on a par with the laws of production, distribution, and exchange." [11] Some of the best-known Marginists, especially those with a critical penchant, developed the concept of consumption into something altogether separate from the psychology of valuation, or if not, thought of consumption in connection with price analysis rather than of the aspects most natural to a collectivistic philosophy. Consumer's rent also loomed up as an item in the subject mainly because total utilities were compared with marginal ones, these latter furthermore becoming determinants of price.

The productive machinery turned on four factors

[7] Wesen und Aufgabe der Nationalökonomie, 1884, p. 19.
[8] Principles of Economics, transl. by Wotzel, A. A., edit. of 1913, vol. 1, p. 42.
[9] Wesen und Hauptinhalt der Theoretischen Nationalökonomie, p. 585. See also Table Two of this book.
[10] Theory of Political Economy, ch. 3.
[11] Scope and Method of Political Economy, p. 107.

which might or might not be living or inert elements. For production being defined, a "factor" of production was any instrument for income. Either a right or an active agent constituted a "factor." Labor was one, and "whatever effort serves the acquisitive end *is* labor." [12] Productive effort was another characterization of labor, but too general when distribution had to be discussed. Land was of course in one sense a physical item. All matter like soil or timber or water-falls or minerals in the bowels of the earth constituted such a factor. But sites and rights might be "land" just as well. And enterprise—to conclude our survey—consisted of the management of the other three factors, the share for this agent being a peculiar compound of several values, not all of which could always be brought under the headings allowed.

Laws of Marginism: Production.—The laws that Marginism derived directly from these definitions with the aid of certain environmental studies related naturally to production, price, and distribution. Occasionally the same principles were discussed under Exchange or under Consumption, notably when the strictly static competitive viewpoint gave way to a dynamic and social one. However, it became clear after a generation of analysis that nothing essentially new in the shape of laws could be added to what Utilitarianism had discovered. Explanations deviated from the customary, but the law itself either remained the same or was reinterpreted so as to cover more than first suspected.

As to production, the physical aspect was not ignored by Marginists any more than by Utilitarian economics. Because of the relation between supply and population, and between supply and price both groups busied them-

[12] Davenport, H. J. Economics of Enterprise, p. 127.

selves with productivity in terms of materials or services as such. But what had happened even before the days of Marginism happened again, namely, the law which by the earliest writers had been supposed to be peculiar to agriculture was shown to apply everywhere. Increasingly it came to be understood as a criticism of the Utilitarian laws of distribution that the idea of diminishing returns was merely a piece of fiction due to the assumption of one single use of the soil. Diversified agriculture and the natural course of improvements, it had been pointed out even by Rae and Carey, would counteract much of the lamented stinginess of nature. However, the main contribution of Marginism lay not in this unorthodox treatment of a static concept, but in the demonstration that the law of diminishing returns, the *return being a fund of values*, really comprised the two laws of the proportionality of factors and of "advantage and size." That is, any one of any given number of agents in a productive process could be increased so that, beyond a certain point, the total monetary return was less than proportionate. Disproportionate outlay in this sense attended all efforts to add to any one factor indefinitely. What was true of capital was true of land or of labor or of enterprise.

Laws of fatigue and of diminishing utility helped to suggest this rather obvious principle. The notion of capital as a fund of values convertible into many specific forms of wealth was a further help in the right direction. Mobility here meant for the extension of the law of decreasing productivity what earlier it had been to the establishment of a single price for any one article or service under perfect competition. But of course what the restatement really implied was that there was only one best way of doing things. An Absolute always may

be predicated even though practice knows only approximations! Since production almost invariably involved the use of more than one "factor," even as Marginism understood the word, the problem was to find a right proportion for each and all of such factors. Under communism such as Wieser liked to imagine, in order to elucidate his value theorems, the ratios would be of stuff more than of values predetermined. It was simply a matter of discovering the recipe by which the cake could be baked best. In the midst of competitive conditions as Marginism postulated them, on the other hand, the pecuniary norm would be decisive. The law of proportions was observed when any one producer had obtained a maximum product respectively profit at a given time and place, everything being reckoned by dollars and cents. The idea of balanced rations in consumption therefore, which German Marginists had in 1889 [13] broached, took on a new aspect when transplanted to the field of production. The Italian economist Pantaleoni (not altogether given over to the Marginal idea!) remarked in his "Pure Economics," 1889: "If all the complementary commodities requisite for the production of a direct commodity are present in different quantities, the quantity of the complementary commodity that is present in a lesser quantity than any other, is that which determines the quantity that can be produced of the direct commodity in question, the superfluous quantities of the other complementary commodities being, for this purpose, destitute of utility." [14] This declaration, though stressing subjective facts in the appraisal of goods, was an earnest of what was soon to follow when Marginism passed over into American hands. Pantaleoni and Pareto, the formulator

[13] Auspitz, R., und Lieben, R. Untersuchungen ueber die Theorie des Preises, Part IV.

[14] Pure Economics, transl. by Bruce, T. B., 1898, p. 83.

of the law of "the variability of coefficients of production," [15] anticipated the more perfect treatments of the next decade.

What became of diminishing returns is easily seen if one remembers that value-creation rather than stuff-conversion figured as production, and that value or price had both been made functions of supply no less than of demand, even by Utilitarians. The law of proportions was a functional view of returns, just as Walras had correlated supplies of a variety of goods with particular demands, and Wieser several uses of one and the same constituent with the price of lowest use in any one article. Any factor, nay, any physical item in the whole set operating jointly for the creation of a value, was subject to a degressive or regressive rate. A simple formula could take care of the situation if the number of factors were not greater than that permitted by Marginism. It would read: "If x with y will produce p; then ax with y will produce more than p, but less than ap; and x with ay will produce more than p, but less than ap." [16] And the law of size would call attention either to the possibility of rising returns in any industry (technologically measured), or to the mere difference between ratios and aggregates of factors used. The technological phases of course need not occupy the Marginist, but he should know that "the most profitable size for the establishment is that under which the *marginal* product of all the factors combined will just equal their cost." [17] [Italics mine.]

Price.—The price analysis of Marginism was completed before that of productiveness or distribution. The founders had said little on production, and no more

[15] Manuel d'Économie Politique, French translation of 1909, ch. 5, § 76.
[16] Carver, Th. N. The Distribution of Wealth, 1904, p. 86.
[17] Ibidem, p. 90. See also Davenport, Economics of Enterprise, ch. 23.

than outlined the applications of marginal utility to incomes. Their price, however, was essentially that of the next quarter century. For both the dissection of joint values and the reduction of cost to utility was work voluntarily assumed by Jevons and Menger. The keynote was this sentence of Jevons that "labor once spent has no influence on the future value of any article." [18] Things and thoughts, i. e., goods used in production and demands growing out of feelings or valuations, should be kept absolutely distinct. The task of the economist was not the establishment of ratios of materials or of labor-times, but of wants of different intensities. Consequently, no matter what might be said of costs, wants lay at the bottom of every price and income.

The premises were the hallowed competitive ones which fitted in so admirably with Benthamism and Associationism. Wieser, to be sure, developed his "Natural Value" on a fictitious communism, but that was only because he never reached beyond valuation and imputation. He gave the psychology of wanting and estimating the ingredients of an ensemble, and showed how the attribution of exact values to each of several joint items in a commodity might bear on the analysis of income. But there he stopped. "Natural value shall be that which would be recognized by a completely organic and most highly rational community." [19] Ignored were "the actual imperfections of valuation, the individualism of our economy, and finally the inequality of wealth," [20] probably for the simple reason that "the question how it is possible to unite those divergent individual valuations into one social valuation is one not to be answered quite so easily as those imagine

[18] Theory of Political Economy, 3. edit., p. 164.
[19] Translation by Malloch, Ch. A., edit. of 1893, p. 61.
[20] Ibidem, p. 282.

who are rash enough to conclude that price represents the social estimate of value." [21]

To another Marginist in America the competitive postulate therefore was preferable if one could eliminate all minor disturbances. And so we are told: "Reduce society to a stationary state, let industry go on with entire freedom, make labor and capital absolutely mobile —as free to move from employment to employment as they are supposed to be in the theoretical world that figures in Ricardo's studies—and you will have a régime of *natural values*" [22] [italics mine]. The dynamic view deserved mention, but failed to be systematized even when promised. The static individualistic view alone satisfied the requirements of an exact economics. Valuations could thus only be translated into prices; and costs would represent but the obverse side of the coin. "The law of costs," wrote Wieser, "is the general law of values looked at from a particular angle." [23]

Wants were everything. Wants graded into many intensities per moment or over a period of time, say in an act of consumption. Margins of utility were tantamount to margins of value as the economist studied them, i. e., to exchange ratios or prices. Since all units in a homogeneous supply were practically interchangeable, (when at all distinguishable physically) any one might take the place of another, and the degrees of satisfaction accruing from the use of each, though differing to the consumer as he added successively one to the other during consumption could be made alike for all when the order of use was changed. Hence "the value of a supply of similar goods is equal to the sum of the items multi-

[21] Ibidem, p. 52.
[22] Clark, J. B. The Distribution of Wealth, 1899, p. 29.
[23] Ursprung und Hauptgesetze des Wirtschaftlichen Werthes, p. 159.

plied by the marginal utility." [24] The exact determinants of a price consisted of the number of dealers in the transaction, of the intensities of want, and of the amount of goods for sale. The question of causation might be ignored as something outside the pale of economic inquiry,—a point that had not been granted at the outset!—but the possibility of exact measurement would remain incontestable. "Price is always equal to the reciprocal value of the marginal utility ratio of exchanged goods." [25] "A logical market-price is that price common to all trades made at the time, which permits the maximum number of transfers with some gain to both parties," [26] the gain being such as followed from an exchange of different preferences with respect to any one or to several commodities. "The value of a unit of any commodity depends upon the supply of the commodity and the demand for it, varying inversely with the supply and directly with the demand, the supply being defined as the amount on hand, or available at the time and place; and the demand being defined as the desire for the commodity coupled with the ability to purchase it." [27] "The price finally established is the money equivalent of the marginal utility of the good to the buyer who is just willing to pay that price, whom we may conveniently designate as the marginal buyer. Who the marginal buyer shall be depends of course on the supply price scale for the particular good as well as on the demand price scale." [28] Prices themselves, in other words, helped to determine supply and demand.

The causal relation between demands and supplies, as

[24] Wieser, F. von, Natural Value (transl. by Malloch, Ch. A., 1893, from the German), p. 25.
[25] Schumpeter, J. Wesen und Hauptinhalt, p. 273.
[26] Fetter, F. A. Economic Principles, vol. 1, p. 66.
[27] Carver, Th. N. Distribution of Wealth, p. 25.
[28] Seager, H. R. Principles of Economics, 1913, p. 119. Also: Ely, R. T., and collaborators, Outlines of Economics, 1917, p. 156.

well as the use of such words as "determine" and "fixed by," is here seen to be side-stepped in the desire to establish an equation rather than a law expressive of immutable sequences. What was aimed at in discussions was the comparison of wants or marginal utilities, whose equivalence with purchase prices was, at the outset, taken for granted. The competitive principle alone needed emphasis if anything definite were to be settled. Monopoly was felt to be exceptional, always potentially on the wane, and furthermore no exception to the hedonistic criterion, though *when* operative it fixed price "always at the point of maximum monopoly revenue" [29] rather than at a point favoring the largest number of sales. And as for the complicated case of a good serving many uses, embodied in different classes of goods, it followed from the leading theorem that the least valuable use fixed the value of all units for all uses. Marginal utility here referred to different uses of one and the same homogeneous stock, and "no unit of the entire stock can be valued at a higher return" [30] than that represented by the least valued use.

So much for the demand or valuation side of price analysis. If now one asked what became of costs, the reply was as stated a while ago: Costs are valuations or marginal utilities of the past viewed by the entrepreneur as monetary outlays for concrete things or for services. All costs were necessarily values. Only the business-man thought of things and expenses; the economist took a larger view, seeing the interdependence between all valuations that entered into a productive process. There was no separate cost, no opposition between it and marginal utility. "The opposition between costs and utility

[29] Seligman, E. R. A. Principles of Economics, 1910, p. 256; and Wieser, F. von, Natural Value (Malloch's translation), Book 5, ch. 4.
[30] Wieser, Natural Value, p. 99.

is only that between the utility of the individual case, and utility on the whole," [31] the chief explanation of this statement being the operation of marginal utility over the "entire field of cognate production." [32] "The price of a good is equal to its marginal utility as well as to the expense of the last particle sold." [33] If a difference existed between expense and price the time-element with its multitudinous aberrations, objective and subjective, must be held responsible. It was not likely that an estimate of any one person should last forever, or that estimates of different people for goods undergoing many stages of production should tally from beginning to end with the sums spent by producers. An average had to be imagined. A representative firm of producers might meet the changes so as to balance values and costs, but in an age of disequilibrium such as the present "the equilibrium of normal demand and supply does not thus correspond to any distinct relation of a certain aggregate of pleasures got from the consumption of the commodity and an aggregate of efforts and sacrifices involved in producing them. . . ." [34] In the long run, or else in a perfectly stationary society, costs and marginal bids will make an equation; not otherwise.

Costs, be they of original production or of reproduction, were values whether viewed as things or as feelings of disutility. In one sense expenses of production consisted of "the exertions of all the different kinds of labor that are directly or indirectly involved in making it, together with the abstinences or rather the waitings required for saving the capital used in making it . . . ;" [35]

[31] Ibidem, p. 183.
[32] Ibidem.
[33] Auspitz, R., und Lieben, R. Untersuchungen ueber die Theorie des Preises, p. x.
[34] Marshall, A. Principles of Economics, p. 458.
[35] Ibidem, p. 399.

in another sense "the cost of a commodity is any pain that must be submitted to in order to obtain it." [36] Pain, physical or mental, opportunity cost or forfeit of alternative gains, impatience and an excess of producer-pain over consumer-pleasure—all these were ideas built at various times into the cost account from the subjective viewpoint.

However, try as they might, Marginists could not get away entirely from objective costs any more than the Utilitarians. Things and their quantities had to be noticed and reckoned with. Costs of the old sort therefore did figure in the Marginal analysis, except that they were made to act upon supply first, and thus upon demand or valuations. It was shown that laws of fatigue and the instinct for equalizing pain and pleasure, wholly apart from laws of return by weight and tale, determined supply, which itself related to want intensities. And so cost and demand early appeared as complementaries in pricing. Marshall was concerned particularly with this aspect, but Jevons before him had summed up the matter in the words: "The quantities of commodity given or received in exchange are directly proportional to the degrees of productiveness of labor applied to their production, and inversely proportional to the values and prices of their final degrees of utility." [37] A minor question only would be, how *differential* costs affected price, and here the answer according to a later American writer was: . . . "the supply of a particular product in any market is at last limited by cost to marginal producers or of marginal portions of supply," [38] a view shared by others before and since.

[36] Pantaleoni, M. Pure Economics, 1898, p. 101.
[37] Theory of Political Economy, edit. of 1879, p. 209.
[38] Fetter, F. A. Economic Principles, vol. 1, p. 370. See also Wieser, Natural Value, Book 5, ch. 5.

But this being the case for prices of things, what then of incomes?

Distribution.—Marginism on this subject could not say much more than Utilitarianism, since both were static in their interpretation of human nature and of social processes. Distribution correspondingly proved to be a contest between producers for a maximum share in a fund of fixed size. The Ricardians had put a construction upon human nature that held out virtually no hopes for the great masses. Hence the motion of a "dismal science." Marginists had rejected from the start the Malthusian doctrine, but they too dealt with concepts suggestive of a struggle between productive factors, or perhaps between proletariat and plutocracy. Feelings and marginal valuations took the place of outgo in things or in labor, but otherwise little was changed. Furthermore, though the demand-supply phase of pricing was obscured by specific imputations of productiveness, and though shares in general were thus displaced by shares in a specfic item of wealth in process of production, Marginism stuck closely to the price-nature of distribution. In fact, this becomes the truer the more exclusively we think of the American or Austrian as against German, French, or English Marginists. Marginal distribution received most careful attention among the former, not among the latter.

Menger and Wieser laid the foundations by their imputation of values to constituents in a compound good. They raised the question: What is any one part worth out of several making a whole finished article? And they answered: Find out by subtracting the part under investigation from the rest (Menger), or add it after having ascertained the value of the other parts going into the article (Wieser). A distinction had of course to be made

between reproducible and non-reproducible items, which might have been extended by comparing different degrees of reproducibility. Indeed, in a dynamic treatment this imputation to least and most growing parts gained significance when applied to "factors" of production such as capital, labor, etc. However, the main problem was the attribution of values to parts or agents at any given instant of time.

Imputation then could move along several lines. One could, for instance, take the whole national dividend and assign shares to its joint producers. Or one could take any one article and find the shares. Or one could consider the whole output of a given plant and find out how much each factor contributed, respectively claimed. Or one could try to determine the share of each unit of a single class of factors, such as labor, comparing the efficiency of each unit as per sequence or coexistence of their several employments. Thuenen had hit upon the marginal productivity idea a half century before Menger or Wieser resumed his labors. It was at any rate a fascinating task from the logical standpoint!

As to wages, one either granted many rates in different regions, or premised a uniform valuation along with the mobility of labor and capital. As a rule the appeal was to a specified field or production unit. All workers of a kind were interchangeable, so that "the work that is left undone in consequence of one man's departure is always of the marginal kind." [39] Under those conditions the marginal man set the wage for all others, no matter how much these latter might be assumed to produce according to the law of diminishing returns. Progress being assumed, the supra-marginal worker led the rest; but in statics the course of events ran the other

[39] Clark, J. B. Distribution of Wealth, p. 103.

way. Regardless of margins, "the wages of a workingman are ultimately coincident with what he produces, after deduction of rent, taxes, and the interest of capital," [40] but from the marginal standpoint—to give Wieser's view—"the ordinary principles of imputation decide what share of the return may be ascribed to each individual service; and the value of this share obtains directly as the value of the service which produces it. Thus every kind and quality of labor shows a different result according to the available supply, demand, the support received from complementary goods, and the technical possibilities." [41]

In other words, wage-rates varied with circumstances in general, and with ratios of factors employed in particular. The manager had much to do with the marginal productivity, as much as the marginal man had to say about the productiveness of the supra-marginal laborers. Besides, though it was argued that "the sum of all the productive contributions exactly exhausts the value of the total return," [42] this was open to debate. It could stand only if one added: "The imputation of the productive contribution assigns to every production good (respectively factor) a medium share." [43] Whether medium relative to fluctuations in time, or to impracticable individual imputations for factors producing jointly an article, was not even then decided. The only certain fact was the force of demand-supply in fixing marginal values and productivities, a corollary of which was: "Should any one factor of production—be it land, capital, or labor—come more freely into our disposal, the natural rules of imputation require that all the others obtain a higher

[40] Jevons, W. S. Theory of Political Economy, edit. of 1879, p. 292.
[41] Wieser, F. von, Natural Value, Book IV, ch. 10.
[42] Ibidem, p. 88.
[43] Ibidem, p. 93.

valuation; as they also require that all the factors be more highly valued if there should be an all-round increase of personal want [of goods]." [44]

On such grounds Marginists found opportunity not merely to reduce incomes to prices, or to determine wages, but also to imply a sort of ethical justice in the apportionment of wealth. Wieser like Gossen and Thuenen before him, shared the opinions of Jevons in this respect; and later writers like Clark, J. B., and Wicksteed in England strengthened the argument. Labor got what was coming to it. To each man according to his product! This old slogan of utopianists and socialists of diverse shades was now transformed into reality by a mode of reckoning unknown to either Smith or Mill. The first sentence of the Preface in Clark's "Distribution of Wealth" announced: "It is the purpose of this work to show that the distribution of the income of society is controlled by a natural law, and that this law, if it worked without friction, would give to every agent of production the amount of wealth which that agent creates." And in Wicksteed's "Common Sense of Political Economy," 1910, we read: "The central thesis of this book is that, so far as the economic forces work without friction, they secure to every one the equivalent of his industrial significance at the point of the industrial organism at which he is placed." [45] Alas, that we were not reminded in the same breath of the definition of utility and production, or of the premises psychological, logical, and legal, on which the analysis rested!

However, the Marginal approach involved also a recantation of Ricardian rents, and that proved to satisfy more standards than those of the marginal laborer. It

[44] Ibidem, Book III, ch. 10.
[45] Page 698. See also Wieser, F. von, Ursprung und Hauptgesetze des Wirtschaftlichen Werthes, p. 177.

was shown by Marginists from Wieser to Schumpeter that Ricardo's exclusion of rent from price was illogical unless applied also to the other three shares, and that in any case it led to absurdities. Differential products were granted to exist. The reality of diminishing returns of *things* was likewise acknowledged. But in the first place the law of proportionality did away with specific physical productivities, replacing them by values, and in the second place rentals became attributes of each and all living producers, so that land, besides figuring as a special kind of capital, lost its distinctiveness. "The rents of all the agents of production constitute, when society is in a natural static condition, the entire supply of goods; and the supply that is furnished by any one of them—or in other words the concrete rent of it—is of course one of the value-determining elements." [46] Rent ceased to be the indication of nature's stinginess. Instead we are informed: "The origin and the existence of rent is dependent on the operation of the law of proportionality" [47] —which governs all acts of production. Rent was a part of the price of goods because of the diversity of uses to which land might be put, and because of the possible loss of better alternate returns either in fruits of the earth or in hire-money.[48] Rent too was fixed by margins; only they were of two kinds, referring now to static, now to dynamic views of economy.

Confusion on this point was not necessary, and indeed differential measurements were coupled with opportunity losses, in that lands always bore some rent,—but abstraction of the Marginal sort here as in the case of interest led far away from Utilitarian ideas. Some Mar-

[46] Clark, J. B. Distribution of Wealth, p. 356.
[47] Fetter, F. A. Economic Principles, vol. 1, p. 163.
[48] See for instance Wieser, Natural Value, Book 5, ch. 12, and Schumpeter, J., Wesen und Hauptinhalt, p. 380.

ginists, for instance, excluded interest from their analysis on the ground that it was not a static phenomenon at all, a notion that had long been applied to profits in so far as they were not assimilable to wages of management. On the other hand, where interest was made part of the distribution opinion was divided on the relative importance of productivity and of impatience, i. e., the preference of present over future goods. In both cases a uniform rate of interest was thought of, and the loan-fund somehow implied to be identical with, or to stand in a definite ratio to, the existent fund of capital goods; but in emphasis discussions varied considerably.

Jevons, himself, had argued for a productivity theory of interest without going into the refinements of later writers. He believed that "the interest of capital is the rate of increase of the produce divided by the whole produce." [49] This would be so even "apart from the question of time," [50] since the "rate of interest depends on the advantage of the last increment of capital. . . ." [51] Wieser supported this contention in his "Natural Value" [52] with much ardor; but in opposition to him his compatriot Boehm-Bawerk wrote: "So long as the wants of spiritual beings call for fuller and finer satisfactions, and so long as the working life rises to higher levels, so long will there be a premium put on the present wealth which makes more ample wealth possible." [53] "It is because the stock of present goods is always too low that the conjuncture for their exchange against future goods is always favorable." [54] Or to bring out another aspect: "Interest will be high in proportion as the na-

[49] Theory of Political Economy, 1879, ch. 7.
[50] Ibidem, p. 248.
[51] Ibidem, p. 255.
[52] Books III and IV.
[53] Positive Theory of Capital, transl. by Smart, W., p. xvi.
[54] Page 359.

tional subsistence fund is low, as the number of laborers employed by the same is great, and as the surplus returns connected with any further extension of the production period continue high, and vice versa." [55]

Impatience thus was selected by Boehm-Bawerk and by many later Marginists as the decisive element in the situation. The technical superiority of capitalistic methods was not overlooked, but in the endeavor to distinguish between things and values, and under the influence of psychological premises, the personal equation seemed the most attractive. In the words of an American writer: "In the general causation of distribution . . . the central rôle is played by the individual rate of preference for present over future income which . . . is the subjective prototype of the rate of interest. The study of the theory of interest therefore lays the foundation for a study of the theory of distribution";[56] and the interest-rate itself is the "excess above unity of the rate of exchange between the values of future and present goods taken in relation to the time interval between the two sets of goods." [57]

Two observations however may, by way of conclusion, be offered on this emphasis of the want-side of values. Namely, in the first place, the productivity-theory of interest could explain a supposed uniformity of rates while the agio-theory could not, or at any rate not so directly. For the productivity standard in general left this clean-cut analysis of distribution: It premised the mobility respectively interconvertibility of labor and capital, and therefore fixed wages and interest at the margin. Neither laborer nor lender could get more than the contribution made by least effective uses, since any other unit of their kind of help was equally available with their own. Only

[55] Page 401.
[56] Fisher, I. The Rate of Interest, 1907, p. 234.
[57] Ibidem, p. 340.

the landlord could keep the supra-marginal product permanently, though enterprisers might for a while, until competition had leveled their temporary differential profits to that of the average producer. Capital and labor hence left a consumer's surplus, except that part of capital's supra-marginal product would be absorbed by the enterpriser. Rent was a strain on consumer's surplus and profits also when rising far in excess of wages-of-management.[58]

In the second place, the agio-theory left open the question as to what determined preference-rates; and though this might be dismissed as something not within the scope of Marginal economics, as a matter of fact opinions differed. Impatience as an attitude of mind of sociological origins was plainly as much a factor for economic inquiry as many other topics embodied in economic treatises. So one is reminded here, as Table Four will serve to illustrate, of the very general disregard of the exact bounds set to economics by the logicians.[59] We find that some subjects of interest to economics were debarred, while others equally irrelevant from a logical standpoint were admitted, not so much to complete a scientific survey, as to satisfy a vague notion that economics should become practical even when theory had nothing to say. Both Utilitarian and Marginal treatises thus contained much material not adaptable to the kind of schematization prescribed by methodology or premises. Current problems of interest to the thinking man everywhere were put under the rubric "Applied Economics," with the implication that the preceding analysis had

[58] For a lucid statement of the productivity view of interest and of its bearing on Distribution see Taussig, F. W., Principles of Economics, 1911, vol. II, Book 5. Contrast this with Davenport's critique in his Economics of Enterprise, chs. 18-20.

[59] Philippovich, E. von, in his Grundriss der Politischen Ökonomie, 9. edit., devotes to discussions of theory somewhat over 25 per cent. of his three-volume work.

TABLE FOUR

SPACE ASSIGNED TO SPECIAL PROBLEMS IN AMERICAN TREATISES ON ECONOMICS, IN PERCENTAGES OF TOTAL NUMBER OF PAGES

Note: Discussions on Public Finance and Money and Banking are *excluded* in the Percentages.

Author	*Short Title of Work*	*Edition Used*	*Percentage for Problems*	*Remarks*
Raymond, D.	Principles of Political Economy	1820	30%	2 vol.
Bowen, F.	Principles of Political Economy	1859	7%	
Perry, A.	Elements of Political Economy	1869	19%	
Walker, A.	Science of Wealth	1872	22%	
Thompson, R. E.	Social Science and National Economy	1875	38%	
Newcomb, S.	Principles of Political Economy	1885	11%	
Walker, F.	Political Economy	1887	11%	
Andrews, E. B.	Institutes of Economics	1889	6%	
Davenport, H. J.	Outlines of Economic Theory	1896	26%	
Hadley, A. T.	Economics	1896	40%	
Bullock, Ch. J.	Introduction to Study of Economics	1900	22%	
Flux, A. W.	Economic Principles	1905	8%	Canadian
Johnson, A. S.	Introduction to Economics	1909	23%	
Seligman, E. R. A.	Principles of Economics	1910	14%	
Taussig, F. W.	Principles of Economics	1911	26%	2 vol.
Fisher, I.	Elementary Principles of Economics	1912	10%	
Seager, H. R.	Introduction to Economics	1913	30%	
Fetter, F. A.	Principles of Economics	1915-16	33%	2 vol.
Ely, R. T.	Outlines of Economics	1917	21%	
Carver, Th. N.	Principles of Political Economy	1919	22%	
Turner, J. R.	Introduction to Economics	1919	9%	
			Average 20.4%	

something definite to offer for their solution. Whether this was actually so or not, was not usually important, for on all sides the abstruse character of theory was felt to be a weakness. It was agreed that applications should be made, or perhaps that economics *as a science* could not take care of all things economic. In either case Marginists were bound to reach out beyond the limits of their Logic.

CHAPTER NINE

CONCLUSION

If we ask now, at the end of our historical sketch, what were the outstanding features in the growth of economics as a science, the answer will of course vary according to the selection of materials, and our personal bias. As stated at the beginning of this survey, historical interpretations cannot be taken to read the same way for all people, regardless of times. The genetic viewpoint is useful not because it gives truths immutable with respect to the data considered, even though they lie in the distant past, but because for the time and purpose necessarily guiding our valuations it serves to connect past and future, and more especially also to disclose lines of change—or if we prefer, of development—that otherwise would probably have escaped our notice.

A definitive judgment therefore can never be passed upon things either now occurring or already of the past. But on the other hand distance does give perspective, and so provides a setting for particulars that must satisfy far more than the impression gained close at hand. In this respect history is like a picture which we wish to study. If we step up too close it loses meaning, and perhaps becomes a mere blotch of pigments. We see nothing of the painter's idea and art. The canvas will look like the palette itself on which mixtures and shades of color have been tried out in grotesque variegation. But if we move away a bit our impression is changed.

By degrees, as we continue stepping back, the splotches assume position and purpose. Objects are definitely recognized. Foreground and background are separated to make room for details which combine to present an attractive whole. We read into the picture certain meanings, guided by the usual experiences of our sense and mind. Perspective is gained, we say; that is, appreciations are possible now because on the plane before us things appear in the relations in which we find them in the outside world. Truth and fidelity, accuracy and beauty thus are revealed. We sense as correct and significant what at too close range seemed nonsensical.

So it is with the events of the past. If we stand too near to them they cannot mean much to us, or at any rate they will not convey the ideas gathered by standing farther away. Contemporary happenings for this reason are personalized, as though each could do as he pleased, or as though each was directly moved by another's commands. The will-aspect of life is uppermost in our minds. We speak of motives and policies and the power of office and of individuals. We enter into the game as if it were of a moment's planning, a mere show that could stop when we demanded, and whose antecedents are of but a moment's plotting. We simplify social processes by taking a snap-shot picture of them, just as a photograph tells us something of a man's appearance, but not all, nor how the features came to be what they are, nor in what way they might consequently be expected to change later. Excessive proximity obstructs our view as truly as blindness shuts us off from it altogether!

As regards the history of economics, however, we are now sufficiently removed from a great deal of it to be entitled to some sort of opinion, even if later estimates will have possibly a still greater value. What the founders

of economics had in mind was evidently, in the first place, an extension of law from the realm of physics to that of psychics. This is a fundamental that can never be overemphasized. It was the fondest wish of the Naturalists to test out the propositions advanced by physics and astronomy, to find out whether human nature was radically different from the physical world, or whether a rationale of meliorism could be discovered that might mean to legislators what applied natural science and mathematics had even then come to mean for producers of wealth.

The astonishing growth of natural science after the Renaissance exercised an abiding influence upon speculators in England and on the continent. It was felt that a great question had really been raised, the answer to which must sooner or later be essayed. In the wake of the discoveries made by men like Kepler, Galileo, Harvey, Newton and so on, followed logically a group of thinkers who endeavored two principal things, first, to unify the new knowledge accumulated by science so as to restate the problems of antiquity, and secondly to span the gulf between physics and psychics. It was asked, what is the difference between the two that makes their linkage impossible? It was asked, why must we assume one set of laws for the outside world, and another for the inner without contradicting not merely Gospel and dogma, but also our reasoning in each of the two fields? And the reply was: The difference is not as great as it seems to be. A monistic conception is the best, all things considered. Eventually the whole realm of reality and of knowledge will have to be bounded by a single law, though to metaphysicians spirit and matter might mean two categorically different spheres, each

a particular kind of truth, and the former ultimately the basis for all else.

Social science thus arose as the result of an outlook that has fought with the dualistic and transcendental for supremacy ever since. It is best understood as a protest against an older theology and metaphysics. For all questions of human thought, feeling, and behavior had been for centuries resolved into definitions of dogma, ethics and politics receiving their stamp from this postulate. But after the Reformation theology was restricted to a smaller sphere of jurisdiction, and as for the professional philosopher, he was not able in the long run to assert his authority, not even such masters as Descartes, Leibniz, Spinoza, Kant and their disciples. So it came about that psychology developed fastest in the home of empiricism, where moralists and students of social relations sought the solution of their problems in an intimate, first-hand study of human nature. The larger aspects of their work were forgotten or deliberately laid aside in the hope of an answer to the less abstruse question whether the methods of natural science could render valuable aid, whether laws might be established such as could compare favorably with the Newtonian.

And the verdict, as stated, was in the affirmative. It could scarcely be otherwise. Stoic speculations and the example of natural science led men to expect notable results from their search. The Newtonian world was widely believed to have a counterpart in the realm of psychic phenomena. Mechanism and motion were to inhere in all things, to govern things and thoughts alike. Forces everywhere; disequilibrium alternating with equilibrium. This was at the basis of eighteenth century thinking; in terms expressive of this viewpoint the best

works were written. Hume, for instance, applying the experimental method to psychology; others believing in a material origin of immaterial facts; Comte expounding a social physics that should be for the moral inquiries what Newton was to the physical; while Quesnay had pictured wealth in circulation, just as blood coursed in the human body. Not mere metaphors these, but analogies held to be real!

If Physiocratism failed we must attribute it partly to a dryness of presentation suitable only for erudites, but partly also to a rapidly changing economic order that had little in common with the life of the Physiocrats themselves. Thus, for several reasons the lead of the French passed over to England where accumulations of literature as well as the outward circumstances provided a fertile field for economists. Constitutional liberties, personal safety, the downfall of the guild system, and exceedingly advanced ideas on economic organization,—here we have factors that could not but encourage men of ability. Smith had a comparatively easy road because the individualistic system first espoused by Frenchmen was nicely attuned to the opportunities of a people on the eve of a great industrial revolution. Business-men could not but take kindly to a doctrine which bade them go full-steam ahead, with the intimation that the race ought to belong to the swift.

Nonetheless there was, as we have seen, the idea of law regulating individual actions as it governed the interactions of matter. The principles of physics that Hobbes, Locke, and Hume had discovered first in the workings of individual consciousness, were gradually transferred to the social field. With the Physiocrats the emphasis, to be sure, had been on the physical side of the human constitution, but Smith and later writers

paid attention increasingly to the psychological aspects. It was psychology that Smith and the Utilitarians first read into economic happenings. It was with the understanding that human nature was in its essentials known, that it was substantially fixed and uniform, that the instincts were few and all-powerful, though exploited by reason as man grew up,—it was this conception that gave to economics a basis for exact measurements, for nicety of delimitation of duties assigned, for definitions and laws that—it was held—could stand worthily alongside of the inductions of natural science.

In Adam Smith's writings economics was still under the tutelage of Christian dogma. Providence played a conspicuous part, and ethics was in reality as strongly Biblical as it pretended to be secular. Hence sympathy won over egoism. Hence Laissez Faire was a conclusion from facts, not a prejudgment as later it seemed to be. However, in Utilitarianism the a-moral and agnostic concept carried the day. Psychology supplanted what had been left of theology. Sensationalism was everything, literally. Ideas now counted, not things. If the Physiocrats had dwelled long on goods in the concrete, the Ricardian followers now pointed again and again to values. And values related to facts of consciousness. It was in a way curious that with all this revolving about sensations the Benthamites did not abandon at once their objective norms of value-measurement. However, they did not. They stuck to tangible things no less than to psychics, until a later group of economists showed the inconsistency of such procedure.

For the time being then the sensational psychology reigned omnipotently. Ethics and economics were marvellously schematized. Sensations, ideas, feelings, associations of inner reactions, and composition of thoughts

and emotions—such were the crucial facts as the pioneers of economics saw them. To know how a social science could exist one had only to demonstrate the interaction between individual minds according to the laws just mentioned. The physical environment was for each and all the same; the result of dual interactions measurable in precisely the same manner that one might account for chains of ideas in any one person. John Stuart Mill was not alone in proclaiming this principle; only, he was most explicit and logical in delineating the scheme whereby economics could be divorced from sociology. Hence the concept of an "economic man."

It was, from this standpoint, also a notable gain that the logical problem should be given an entirely new aspect; that medieval deduction should be replaced by deductive natural science, or on the other side by induction as it had long been urged by prophets in the field. Economics therefore served as a proving ground for a new weapon that natural scientists could not furnish. It was argued that, given certain laws of mind and emotion, economics was bound to go about its work just as mathematics did, though a verification might and should be attempted whenever the nature of the problem allowed. The calculation of values necessitated such a stand, and in the hope of being exact the predominance of economic motives was predicated as a basis for detaching a general social and ethical science from that of Adam Smith. Averages consequently played no part in Utilitarian economics, though a dynamic view like that of Historism could logically resort to it for important conclusions. And what is more, for similar reasons economics at no time relied excessively upon either statistics or experimentation; for the one was unnecessary if eighteenth century psychology was correct, and the other was con-

ceded to be impracticable except on minor occasions. So economics continued to be a deductive discipline with claims to precision born ultimately of sensationalism, but attributed immediately to abstractions which could be rectified in the light of particulars when it was so desired. What else could happen under those circumstances? Plainly economics was playing with concepts, as well as studying the concrete.

Furthermore, the breach between the original and the later Utilitarian and Marginal economics was widened by a shifting of emphasis that was truly startling. Smith had dealt with prosperity, production, stuffs in circulation, surplus of stuffs and their ratios; but afterwards we hear much of pleasure, price, values distributed as rights to goods, and of capital as a fund. Rights rather than ratios are involved. To the hedonistic premises are added legal presuppositions without which economics has no existence. Freedom of contract and competition thus became essentials in the scheme, even if perhaps historically of a particular time and place. The whole valuation and pricing process is built on differentials of purchasing-power, opportunity, and personal aptitude. The strong set up standards of productiveness for the weak. To produce is to render services whose value is individualized as never before.

Utilitarian economics attacked the price problem by comparing time and labor units. At the outset it was hoped that time might be an equivalent for productiveness; but later on labor itself was referred to products, so that socialism stood alone in its objective explanation of wealth. The idea of measuring expenditure of energies never found many friends. Hence, when the time-element too was discarded, prices ceased to be accounted for on non-competitive principles. What re-

mained was a summation of expenses according to entrepreneur norms, and this indeed turned out to be the usual method of computation. Differential productivity of stuffs had a place only in agriculture or industry because production was separated from value and distribution.

Marginism was therefore consistent in denying from the start the possibility of *explaining* prices as had been understood once upon a time. The conclusion reached by the second quarter of the century, viz., that price analysis involves equations rather than specific causation found favor also with the founders of Marginism. Only, they put differential want and rates of preferences in place of differential objective productivity. The equation which now served to determine ratios of exchange for either goods or services dealt not with time or energy or stuffs, but with pain and pleasure, with feelings and wishes and utilities. Eighteenth century psychology again proved fundamental in that it provided the standards by which purchases were to become rational. For sensations are supposedly back of ideas, and ideas back of feelings; and feelings are made synonymous with emotions; and memory and association step in to arouse and re-arouse former ideas and feelings; and anticipations of pleasure have the effect of realization itself; and intensities of feeling or ideas are measured by last increments which indeed are the most characteristic feature of Marginism. Thus want and value not only were proportionate to sense impression and feelings, but in addition they unfailingly resulted in deeds of exchange, so that price became the last link in a long chain of psychological facts skillfully maneuvered for a definite purpose. There was nothing else to be done in the matter, unless people gave up the connection between

psychics and prices altogether, in which case, as some grudgingly admitted, a vicious circle was avoided at the cost of the analysis itself. What then was left was a balancing of pecuniary valuations in the open market, the net result being once more equations of prices, but traced to differential purchasing-powers rather than to differential want intensities. Hence Marginism would have renounced its original intents.

The Historical movement was preëminently a protest against the Utilitarian interpretation of Adam Smith, but as events showed, there was good reason why it should also disagree with the Marginists who were the logical successors of Utilitarianism. So, while Historism was but an episode in the larger performance, and withal a piece of extravaganza that many thought not worth while, it had nevertheless a mission to fulfill. It made economists think by bringing out contrasts that might otherwise have been overlooked. It took exception to one philosophy, and propounded another. It put on the debit side: The individual, statics, instincts, earnings, the entrepreneur, and a time-honored absolutistic ethics; while at the right side of the line it put: Social norms of welfare, dynamics, a stress of learning and self-control, ideals of consumption, state interference, and withal a new sort of morality that is pagan rather than Christian in the accepted sense.

That is, the friends of Historism had done away with rampant individualism as espoused by the founders of economics. They saw no good in the static abstractions that detached economic activities from social processes as a whole. To them these latter constituted a single irreducible unit. To them hedonism was an inadequate way of appraising human nature and social history, because it exaggerated egoism and underestimated the force

of post-natal experiences. It was granted that congenital traits must count. But it was also pointed out that the inherent good in man needed only a right stimulus to suppress proclivities for sordid pleasure. Hence, what Smith had deemed a task in part fulfilled by Providence, and for the rest a natural expression in an age-long evolution of mankind, the Historians hoped to accomplish by a direct and systematic control of individual actions. Social heredity, since it surrounded man from birth to death, was to lead him under proper surveillance into right channels of thought and conduct.

Accordingly individual and social interests were not considered as necessarily indentical at all vital points. What a man desired might be good enough, but what he achieved might do harm. Furthermore, what a man earned could not matter as much as what he produced, and *how* he produced it. An uncompromising business viewpoint was avoided as possibly damaging to public welfare. What was needed, we are told again and again, is a socializing of religion, a substitution of practicable aims here on earth for fancies nowhere realizable. Hence it is not surprising perhaps that German economists, even when not strictly of the Historical School, had great faith in state regulations and purposely widened the field of economics in one sense while narrowing it elsewhere; including programs and aspects looked askance at by orthodox writers, but emphasizing a nationalistic end whose pragmatic tests endangered one of the most fundamental rules of pure science.

However, it must also be admitted that traditional orthodox economics has recently been criticized from within. Not only outsiders have passed slighting remarks, but increasingly economists of the profession, even when in the main Utilitarian or Marginal, have taken

occasion to demur to points of doctrine. A ferment has been noticeable in the last few decades which bodes ill for the old-time system. New ideas have been broached, and new ends are diligently sought.

Thus, for one thing, our concept of human nature has materially changed. Its simplicity from either the psychological or biological standpoint is being questioned, and the difficulty of untangling its numerous factors reluctantly conceded. We know more now of laws of heredity and variation, but have at the same time found the question of instincts and the passions to be as vexing as ever. Investigators have come to stress the plasticity of innate traits and predispositions, and to rely more upon education in many phases.

How men value things, and how price takes the place of personal wants, this problem has gained renewed interest. The force of legal institutions is no longer disregarded in analyzing demand. And what is more important, the central theme has gradually been impugned as being an error of judgment. Some would minimize Price and Distribution and pass over to a more careful consideration of Consumption and Control.

But however that may be, it will further be agreed that the logic and methodology of social science is itself undergoing a revision of no trifling sort. What is reasoning and what the relation between induction and deduction, what really should be meant by causation and how our answer bears on a selection of fields for inquiry, to what extent measurements may be undertaken and whither laws so arrived at may lead to in their practical uses, how static concepts and statistical methods may together furnish an instrument of discoveries—all these queries are tending to reappear in new guise and with a new meaning.

The old mechanistic psychology is passing away. Some

would remark that it has long passed away. What mind is and how human will labors to produce history is a topic for examination with appliances not formerly known. Consequently, too, our view of what morality is and of what ethics depends on for its conclusions is being altered by degrees. Eventually, no doubt, new norms of prosperity will be contrasted with the ancient absolutistic ones. To government will be assigned more onerous duties than have been given to it formerly. A changed economic environment is bidding students to prepare for recantations and research. Marginism, therefore, cannot be held to reign unchallenged, much less to have brought the development of economics to a close.

Heretofore economics belonged essentially to Europe. It was in France that the science had its inception, and in England that it reached its highest development along lines suggested by the author of "The Wealth of Nations." Throughout the entire course of its growth economics must be granted to have found eminent leaders on British soil. There method and principles were studied most carefully, and in an original manner; there the practical aspects engaged thinkers and legislators more seriously than perhaps anywhere else. The historical standpoint was treated best by the Germans, although other nations had contributed something in earlier days. The Austrians in the next place, gained prestige by their clear and complete exposition of the marginal principle, a rather odd fact considering the Anglo-Saxon origin of the psychological doctrines at the root of it. And lastly, the United States laid Europe under obligation for ideas essential to both static and dynamic economics, the last half century having in this respect fulfilled promises made many generations ago by philosophers and psychologists unacquainted with a science of economics.

Whether hereafter the leadership shall remain with a few countries—not denying the laudable part played by Italy and minor nations of the Old World—no one can say. But it seems not unlikely that changed conditions, precipitated by the Great War, will stimulate additional people to constructive thinking. Civilization is no doubt to be less centralized geographically from now on than it has been so far. A number of countries have been awakened to the western viewpoint whose voice should not go unheard in the long run. Much new material, and new modes of approach, are to be tried out for partly new purposes, wherefore histories of thought, and of economic theories in particular, will very probably gain rather than lose in importance.

A WORKING BIBLIOGRAPHY

INTRODUCTORY NOTE

(1) A complete and thorough history of economics as a science, that would do justice to all its phases including particularly its roots in philosophy and psychology, has not yet been written. It is therefore not supposed that the materials here listed will afford an exhaustive treatment of the subject, or even cover all aspects involved. However, they are meant to give a working bibliography for a study of many important sources, especially such as are readily available in the United States. Further materials will inevitably be encountered in the perusal of materials here listed, notably of course in scientific periodicals and cyclopedias.

(2) The non-economic literature bearing on the development of economics is so important that it seems expedient to include much of it even in an introductory survey. The main line of division (A and B in this bibliography) between non-economic and economic literature will therefore explain itself. On the other hand, the distinction between works on methodology and works on principles of economics is made chiefly to call attention to the important rôle that premises have always played in the exposition of economic doctrines.

(3) Books and articles have been selected on the principle of giving what is most representative of a school or outlook, or is pioneer labor, or was peculiarly influential in the history of economics. Many works of equal intrinsic merit have thus been ignored merely because of the restriction in number.

(4) It cannot be emphasized too strongly that a careful student must rely upon sources rather than upon secondary works on his subject. The study of primary materials will give that touch of realism and of conviction that no other authority can promise. Hence the divisions I and II made below under both A and B.

(5) For the eighteenth and nineteenth centuries a number of doctrinal works have been given, classified by countries, because—with very few exceptions—individual treatises are not considered in this book. However, the footnotes provide further references of value.

(6) For all *source* materials the date of *first* publication is given, though in some cases the dates of later editions and of translations have been added. Furthermore, excepting American literature, which has been considered up to 1910, the bibliography reaches only up to 1900.

Finally, histories of economics best suited to the needs of American students have been marked with an asterisk; but this does

not make other accounts by any means negligible. Diligent reading of both European and American books will yield fruitful suggestions in abundance.

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